

**JOBS AND OPPORTUNITY: EMPLOYER  
PERSPECTIVES ON THE JOBS GAP**

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**HEARING**  
BEFORE THE  
SUBCOMMITTEE ON HUMAN RESOURCES  
OF THE  
COMMITTEE ON WAYS AND MEANS  
U.S. HOUSE OF REPRESENTATIVES  
ONE HUNDRED FIFTEENTH CONGRESS  
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## **JOBS AND OPPORTUNITY: EMPLOYER PERSPECTIVES ON THE JOBS GAP**

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**WEDNESDAY, APRIL 25, 2018**

U.S. HOUSE OF REPRESENTATIVES,  
COMMITTEE ON WAYS AND MEANS,  
SUBCOMMITTEE ON HUMAN RESOURCES,  
*Washington, DC.*

The Subcommittee met, pursuant to call, at 11:30 a.m., in Room 1100, Longworth House Office Building, the Honorable Adrian Smith [Chairman of the Subcommittee] presiding.  
[The advisory announcing the hearing follows:]



## **WAYS AND MEANS**

CHAIRMAN KEVIN BRADY

### **Chairman Smith Announces Human Resources Subcommittee Hearing on Jobs and Opportunity: Employer Perspectives on the Jobs Gap**

House Ways and Means Human Resources Subcommittee Chairman Adrian Smith (R-NE) announced today that the Subcommittee will hold a hearing entitled “Jobs and Opportunity: Employer Perspectives on the Jobs Gap” on **Wednesday, April 25, at 11:30 AM in 1100 Longworth House Office Building**. This hearing will continue to highlight employers’ demand for workers, and the need to get more Americans into the labor force.

In view of the limited time to hear witnesses, oral testimony at this hearing will be from invited witnesses only. However, any individual or organization may submit a written statement for consideration by the Committee and for inclusion in the printed record of the hearing.

#### **DETAILS FOR SUBMISSION OF WRITTEN COMMENTS:**

Please Note: Any person(s) and/or organization(s) wishing to submit written comments for the hearing record must follow the appropriate link on the hearing page of the Committee website and complete the informational forms. From the Committee homepage, <http://waysandmeans.house.gov>, select “Hearings.” Select the hearing for which you would like to make a submission, and click on the link entitled, “Click here to provide a submission for the record.” Once you have followed the online instructions, submit all requested information. ATTACH your submission as a Word document, in compliance with the formatting requirements listed below, **by the close of business on Wednesday, May 9, 2017**. For questions, or if you encounter technical problems, please call (202) 225-3625.

#### **FORMATTING REQUIREMENTS:**

The Committee relies on electronic submissions for printing the official hearing record. As always, submissions will be included in the record according to the discretion of the Committee. The Committee will not alter the content of your submission, but we reserve the right to format it according to our guidelines. Any submission provided to the Committee by a witness, any materials submitted for the printed record, and any written

comments in response to a request for written comments must conform to the guidelines listed below. Any submission not in compliance with these guidelines will not be printed, but will be maintained in the Committee files for review and use by the Committee.

All submissions and supplementary materials must be submitted in a single document via email, provided in Word format and must not exceed a total of 10 pages. Witnesses and submitters are advised that the Committee relies on electronic submissions for printing the official hearing record.

All submissions must include a list of all clients, persons and/or organizations on whose behalf the witness appears. The name, company, address, telephone, and fax numbers of each witness must be included in the body of the email. Please exclude any personal identifiable information in the attached submission.

Failure to follow the formatting requirements may result in the exclusion of a submission. All submissions for the record are final.

The Committee seeks to make its facilities accessible to persons with disabilities. If you are in need of special accommodations, please call 202-225-1721 or 202-226-3411 TTD/TTY in advance of the event (four business days notice is requested). Questions with regard to special accommodation needs in general (including availability of Committee materials in alternative formats) may be directed to the Committee as noted above.

Note: All Committee advisories and news releases are available at <http://www.waysandmeans.house.gov/>

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Chairman SMITH. The Subcommittee will come to order. Good morning and welcome to the third hearing in our series focusing on jobs and opportunity. The purpose of these hearings is to demonstrate how, as our economy continues to strengthen, following the enactment of the Tax Cuts and Jobs Act, employers' demand for workers is growing and our human services programs can plan an important role in supporting the next wave of workers needed to continue this economic growth.

Millions of Americans are on the sidelines of our economy, and it is vital we understand how taxpayer resources, particularly those under this Committee's jurisdiction, are being leveraged, or not, to address the needs of those struggling to get ahead. With the Temporary Assistance to Needy Families program set to expire in September, this Committee must not stand down from its responsibility to reauthorize this program and provide certainty to families, States, and taxpayers.

Last week, we were honored to welcome Department of Labor's Secretary Alexander Acosta to share the Federal Government's perspective. Secretary Acosta told the Committee in his opening remarks how the Department of Labor has been working to keep our economy moving forward because, as it fires on all cylinders, with the help of the Tax Cuts and Jobs Act.

He said, quote: "At the Department of Labor, we are creating opportunity for all Americans by expanding apprenticeships across all

industries by streamlining traditional workforce education and providing State leaders the flexibilities they need to meet the needs of job creators and their local workforces,” end quote.

Secretary Acosta also emphasized the demand from Governors for more flexibility to focus funds on where they can best serve the needs of the communities. He rightly pointed out that Nebraska is different from California, which is very different from Florida and went on to add, it is not just cooperation between the agencies but also flexibility to allow the Governors to focus workforce education funds where they best serve the needs of their States.

Two weeks ago, before this Subcommittee, we heard about local perspectives from Members’ districts about the challenges they are facing in an economic environment with low unemployment and more than 6 million job openings. Three witnesses, including a program participant, testified about a program, the Arizona Homebuilders Association, started to help companies be able to continue to grow as they face a labor shortage. The association partnered with Arizona correctional facilities to provide training in construction trades to inmates nearing their release date. These are win-win programs.

Companies gain access to a strong labor pool of hardworking individuals, and incarcerated men and women are given the purpose and stability of good jobs, reducing recidivism. Public policy should have the same goals. But the programs heard about 2 weeks ago were created and operated entirely without the use of Federal, State, or local funds or programs.

At the same time, there are more than 40 federal job training programs. States are spending a combined \$30 billion a year through TANF, and less than half of those dollars are being spent on core work activities and supportive services that could help close the jobs gap.

Today, we continue our exploration of the jobs gap, the difference between the employers’ demands for workers, shown as job openings, and the declining number of individuals in the workforce, as shown on the screen as the labor force participation rate. Our panel features several larger national employers across industries, including automotive, manufacturing, chemical, and retail.

They will each highlight challenges they face in growing their businesses due to a lack of workers. What they are doing to address the jobs gap and what they believe is the best way to promote Americans to get back into the workforce. Today’s employers may have similar stories as those from our first hearing, but we will be focusing on their business case for investing in workers on the sidelines to get them job-ready.

We will also learn more about why this moment is different from those in the past and the urgency which is needed to address the jobs gap. Today I am excited to learn from the witnesses about their experiences and what has led to their success so we can translate these lessons into better public policy for across-the-board victories for American workers, American families, American businesses, and the American economy.

Without objection, I will now recognize Mr. Davis, our Ranking Member, for his opening statement.



Mr. DAVIS. Thank you, Mr. Chairman. And I thank you for holding this hearing. I have appreciated your willingness to hear from a range of voices, including returning citizens who are often left behind by the economy and left out of our policy changes. I also hope we will have the opportunity to hear testimony in response to specific potential changes.

We need ample feedback from the people who are successfully lifting up families in our communities to ensure that any policy changes we consider will help more Americans get good jobs and not bring added hardship on struggling families. Thurgood Marshall correctly observed that none of us got where we are solely by pulling ourselves up by our bootstraps. We got here because somebody—a parent, a teacher, a family, or a political connection, a nun, or other faith-inspired person or program—helped us pick up our boots.

More than three-fourths of unemployed Illinois residents live in the Chicago area. In my congressional district, the unemployment rate is over 9 percent, and more than a fourth of families with children live in poverty. In Illinois the Black unemployment rate is twice the overall State unemployment rate, and at least 43 percent of Black men, aged 20 to 24 in Chicago, are neither employed nor in school.

I share your desire to connect people with jobs so they can lift themselves and their families out of poverty. But I remain concerned by the rhetoric we are hearing in Washington, suggesting that helping people with barriers to employment who live in communities with few resources, who lack connections in some form of offensive welfare, that merits cutting or attaching humiliating conditions. We should not be cutting off food, housing, and healthcare for people who aren't working. We should be knocking down the barriers that are keeping them from getting good jobs and supporting them, just as people supported us in achieving their goals.

I am looking forward to hearing from our witnesses today. I want to think not just the good they are doing, but also what we can learn from them about what works and how we can apply these lessons to programs we oversee, like the Temporary Assistance to Needy Families program, or TANF; the Fatherhood grants; and child support enforcement.

We know that low-income fathers are among those who encounter multiple barriers to good jobs, and we know that State TANF programs are generally not assisting them, and child support enforcement programs are sending them a bill but not helping them to get a job to pay it. We know that the mothers served by TANF are encountering barriers to education and training that were created by Congress and keep them from getting good jobs.

And we know that many families are struggling just to get the basics—food on the table, a roof over their heads, treatment for serious health conditions—and there is no point in trying to find them jobs until they have those basic necessities. There are many good things happening in communities across the country, but they are not available to everyone who needs them.

TANF is supposed to help parents work, but what is clear from witness testimonies from this and past hearings is that TANF is not conducting quality workforce development with the array of

services needed to support workers with multiple barriers. We should take these lessons about what works and apply them to create widely available opportunities for parents to succeed.

Helping our citizens address these barriers and obtain quality, good-paying benefits our communities, our Nation, and our economy is in need. I, too, welcome our witnesses, and thank you again for holding this hearing.

Chairman SMITH. Thank you, Mr. Davis.

Without objection, others Members' opening statements will be made a part of the record. I would like to welcome our witnesses here today.

First, we have Mr. David Ard, a senior vice president and global head of people and communications at Gap Inc. Next, we have Ms. Julie Shapiro, executive director of The Door, an organization in New York City. Next, we have Mr. Steve Staub, president and owner of Staub Manufacturing Solutions in Dayton, Ohio. And next we have Dr. Dan Lustig, president and CEO of the Haymarket Center in Chicago, Illinois. And then we have Mr. Glenn Johnson, the manufacturing workforce development leader at BASF Corporation in Houston, Texas.

I now recognize Mr. Bishop for the purpose of introducing his constituent from Michigan.

Mr. BISHOP. Well, thank you, Mr. Chair. It is my great honor to be able to introduce Barb Pilarski. Ms. Pilarski is the head of human resources for Fiat Chrysler North American Operations based just outside my district in Auburn Hills, Michigan. Similar to the others employers we have heard from in the previous hearings, Fiat Chrysler is also experiencing major workforce challenges, especially in finding workers for their manufacturing plants in order to keep up with the increasing demand for their vehicles.

They have recently interviewed several thousand nonskilled employees to fill openings as part of their new industrialization plan, and several thousand more are forthcoming. They have also restructured their hiring approach and the interview process and are considering changing the requirement of a college degree to be a supervisor. To their great credit, Fiat Chrysler has been working proactively with United Way and other partner organizations to connect employees and potential employees—excuse me, employers and potential employees to support services they need to enter the successful—and be successful in the workforce.

Ms. Pilarski, we appreciate you being here today to provide your perspective on the jobs gap, and we look forward to your testimony.

Chairman SMITH. Thank you.

Witnesses are reminded to limit their oral statements to 5 minutes. All of your written statements, certainly in their entirety, will be included in the official record. We will begin with Mr. Ard. Begin when you are ready.

**STATEMENT OF DAVID ARD, SENIOR VICE PRESIDENT AND  
GLOBAL HEAD OF PEOPLE AND COMMUNICATIONS, GAP  
INC., NEW YORK, NEW YORK**

Mr. ARD. Chairman Smith, Ranking Member Davis, and Members of the Subcommittee, it is an honor to be with you today at this very important hearing on the challenge of finding qualified

workers to support our businesses and provide Americans more opportunities for jobs.

I am here to talk about This Way Ahead, which is a Gap Inc. program that gives young people, especially those facing barriers to employment, an opportunity for their first job with an Old Navy, Gap, or Banana Republic store. Before I share more about This Way Ahead, I ask you to pause for just a moment and think about your first job and what it taught you.

My first job was working at a video store. And through that job, I learned that my time was worth something, got a lot of great free movies, and working allowed me to pay my own way, which was really important. I grew up in a small town. My parents didn't have a lot of money, a small town in south Florida.

A first job is an important milestone in every person's life. For many young people, especially those with limited opportunities, it can be life-changing and it can shape an individual's prospects for the future. In the United States, there are 4.6 million opportunity youth that are disconnected from school and from work.

Research shows that not getting a first job as a teenager has a profound effect on your long-term earning potential. For example, being unemployed young can reduce earnings by as much as 20 percent for up to two decades. To address the challenge for opportunity youth, we recognized that we have two key job assets: jobs in our stores and the experience of hiring teenagers.

In our company's nearly 50-year history, we estimate that we have given over 1 million youth their first jobs. It is a really important responsibility that we believe we have in the community. Our store managers are great at coaching, and they are great at development, and we know what it takes to help young employees get on the path to future success.

So, in 2007, we designed This Way Ahead, and that was to give youth facing barriers a way to the workforce and a way up. Over the last 10 years, we have also come to recognize that This Way Ahead is very important for the long-term sustainability of our business. The program helps to expand our talent pool, to support business growth and foster a future customer base.

Here is how the program works. In each of the locations where This Way Ahead operates, we team up with local nonprofits that run job training programs, like The Door that my friend, Julie Shapiro, runs in New York City. These nonprofit partners recruit motivated youth, ages 16 to 24, facing barriers to employment.

Our local Old Navy, Gap, and Banana Republic store employees, they volunteer with the nonprofits to help support training, making connections with the youth. Our employees run workshops on topics like customer service, conflict resolution, as well as presentation skills.

When the training ends, youth apply and store managers interview them. Thanks to the volunteer interactions prior to the interviews, the youth and our hiring managers, they aren't meeting for the first time. So, it is not a high-stakes interview. One of the key differentiators lies in the interview itself. We guide the hiring managers to hire for potential, not credential: a prevalent openness to feedback, and work ethic. Since those are two factors that contribute to success, the youth who demonstrate these attributes are

hired to work in an Old Navy, Gap, and a Banana Republic store. And even more important than getting a job is keeping that job.

In addition to store managers who offer guidance and feedback, we also build another support system to help keep youth employed. Each This Way Ahead participant has what we call a Big Sib, who helps them and supports them on questions that they have and questions that they may not want to ask their managers. I think we all need a Big Sib sometimes in our life. It goes into things like how their locker works or where they eat lunch.

There is also a job coach from the nonprofit who meet regularly with the youth to provide additional support and advice on issues that may come up at work and home. All these supports, in addition to the exposure of Gap Inc.'s culture and values, help to make the youth feel at home and welcomed into the family. They know we believe in them, and they want to succeed.

I want to give a brief example and a story of Dashawn Hightower—he is a This Way Ahead alumnus—that underlines the importance of these supports. Dashawn currently works at one of Gap Inc.'s largest stores, our Old Navy at 34th Street in Manhattan. He is a business and operations training specialist, and he is the oldest of three children. He lives with his mom and his sisters in the Bronx.

Dashawn started his career with us at This Way Ahead, participated in our Old Navy store in Harlem, New York. In his words: This Way Ahead was a struggle. There were times when I was late or got written up, but my managers pushed me. They didn't give up on me. Finally, my manager, Yeera, pulled me to the side and asked, what is it you want to do with this opportunity? I thought I had joined the program to become a sales associate and get a check. She made me realize that this was only the beginning. If I worked hard enough, there was a real opportunity to grow within the company. That is what it took to turn me around.

Dashawn has continued to grow his career with our company. He has held multiple specialist roles and has been promoted several times. He is now supervising This Way Ahead participants, helping others to see the opportunities to advance professionally.

I will give a couple of statistics, for the purpose of time, and I would be very happy to answer questions as we go forward. But a few things in terms of our results and things that give us confidence that there is greater opportunity for us to move forward: 71 percent of This Way Ahead participants improve their soft skills, so things like decision-making and time management; 72 percent of our alumni from 2007 to 2016 are employed in at least one paid job, versus 55 percent of 16 to 24 year olds in general U.S. population; 81 percent of This Way Ahead store managers said that This Way Ahead increases their pride in working for our company; and 66 percent said it gives them a lot more—said it makes them a lot more willing to go above and beyond what is normally expected to help their brand succeed.

We give advice to other employers all the time. Do not underestimate the valuable talent you may be overlooking by relying on traditional recruitment and training practices. Programs like This Way Ahead demonstrate that we do not need to choose between what is good for the community and what is good for business. We

can have both. We can have them at the same time, and we can create sustainable programs that benefit all of us. Thank you.

Chairman SMITH. Thank you, Mr. Ard.

[The prepared statement of Mr. Ard follows:]

Testimony of C. David Ard, Senior Vice President, Global Head of People and Communications, Gap  
United States House Ways and Means Committee  
Human Resources Subcommittee  
Hearing on Jobs and Opportunities: Employers and the Jobs Gap  
April 25, 2018

Chairman Smith, Ranking Member Davis, and members of the subcommittee, it is an honor to be with you today at this very important hearing on the challenge of finding qualified workers to support our business and providing more Americans opportunities for jobs.

I am here to talk about This Way Ahead, a Gap Inc. program that gives young people – especially those facing barriers to employment – an opportunity for a first job in Old Navy, Gap, and Banana Republic stores.

Before I share more about This Way Ahead, I ask you to pause and remember your first job and what it taught you. My first job was in a video store. Through that job, I learned that my time was worth something. Working allowed me to pay my own way when I was growing up, which made me feel in control.

A first job is an important milestone in every person's life. For many young people, especially those with limited opportunities, it can be life-changing and shape an individual's prospects for the future.

In the United States, there are 4.6 million "opportunity youth" – disconnected from school and work.<sup>1</sup> Research shows that not getting a first job as a teenager has a profound impact on your long-term earning potential. For example, being unemployed young can reduce earnings by as much as twenty percent for up to two decades.<sup>2</sup>

To address the challenge for opportunity youth, we recognized that we have two key assets: jobs in our stores and experience hiring teenagers. In our company's nearly fifty-year history, we estimate that we've given over one million youth their first jobs. Our store managers are great at coaching and development. We know what it takes to help young employees get on a path to future success.

So in 2007, we designed This Way Ahead to give youth facing barriers a way in to the workforce – and a way up.

Over the last ten years, we have also come to recognize that This Way Ahead is important for the long-term sustainability of our business. The program helps to expand our talent pool to support business growth and fosters a future customer base.

Here's how the program works: in each of the locations where This Way Ahead operates, we team up with local nonprofits that run job training programs. These nonprofit partners recruit motivated youth – ages 16 to 24 – facing barriers to employment. Our local Old Navy, Gap, and Banana Republic store employees volunteer with the nonprofits to help support training, making connections with the youth. Our employees run workshops on topics like customer service, conflict resolution, and presentation skills.

<sup>1</sup> <http://www.measureofamerica.org/youth-disconnection-2018/>

<sup>2</sup> The Economist, *Youth Unemployment: Generation Jobless*, 2013

When the training ends, youth apply and store managers interview them. Thanks to the volunteer interactions prior to the interviews, the youth and hiring managers aren't meeting for the first time in a high-stakes interview.

One of the key differentiators lies in the interview itself: we guide the hiring managers to hire for potential, not credential. They probe on openness to feedback and work ethic, since those are two factors that contribute to success. Youth who demonstrate these attributes are hired to work in Old Navy, Gap, and Banana Republic stores.

Even more important than getting a job is keeping that job. In addition to store managers, who offer guidance and feedback, we also build in other support systems to help youth keep the job. Each This Way Ahead participant has a 'Big Sib' who they can ask questions they don't want to ask their managers, like how their locker works or where to eat lunch. There is also a job coach from the nonprofit, who meets regularly with the youth to provide additional support and advice on issues that may come up at work and at home.

All these supports – in addition to exposure to Gap Inc.'s culture and values – help to make the youth feel at home and welcomed into the family. They know we believe in them and want them to succeed.

I want to share the story of Dashawn Hightower, a This Way Ahead alumnus, that underlines the importance of these supports. Dashawn currently works at one of Gap Inc.'s largest stores, Old Navy 34th Street in Manhattan, as a Business + Operations Training Specialist. Dashawn is the oldest of three children, and lives with his mom and sisters in the Bronx. Dashawn started his career with us as a This Way Ahead participant at our Old Navy store in Harlem, New York. In his words:

*"This Way Ahead was a struggle — there were times when I was late or got written up. But, my managers pushed me, they didn't give up on me. Finally, my manager Yeera pulled me to the side and asked, 'What is it you want to do with this opportunity?'"*

*"I thought I had joined the program to become a sales associate and get a check. She made me realize that this was only the beginning. If I worked hard enough, there was real opportunity to grow within the company. That's what it took to turn me around."*

Dashawn has continued to grow with the company. He has held multiple specialist roles and has been promoted several times. He's now supervising This Way Ahead participants, helping others see the opportunities to advance professionally and grow their careers within our company.

In addition to the thousands of stories from program participants and managers, we've been tracking data on program participants since we launched the program in 2007. We know that youth who join our company through This Way Ahead make great employees:

- Their retention is strong: they typically stay twice as long as their peers
- They're a highly diverse group; last year, 96% self-identified as people of color
- They have some of the highest engagement scores in the company

As someone who thinks a lot about how to attract high-caliber talent to our company, this program is a dream come true. It is a secret weapon that makes my job that much easier:

We've also measured the program's impact through a third-party evaluator since the beginning. This past year:

- 71% of This Way Ahead participants improved their soft skills a lot (skills such as decision-making and time management)
- 70% of This Way Ahead participants increased their confidence a lot, particularly their confidence that they will be able to get a job in the future and their confidence in themselves overall

Managers of This Way Ahead participants grow too. Last year, 85% of This Way Ahead managers grew in at least one key competency – ability to manage teams, communications skills, or ability to work with people from diverse backgrounds.

Beyond their own development, managers value that their company is investing in the community.

- 81% said that This Way Ahead increases their pride in working for Gap Inc. a lot.
- 66% said it makes them a lot more willing to go beyond what is normally expected to help their brand succeed.

Again, as the head of people for Gap, this is important. It means our leaders are developing professionally and are engaged in their jobs.

As I mentioned, we have tracked results of This Way Ahead for many years. Because of consistently strong results, in 2016 Gap Inc. set a goal that by 2025, 5% of our entry-level new store hires employees will be This Way Ahead alumni.

We see 5% as just the beginning. We believe that some of the things we do today as part of This Way Ahead could become what we do for all our employees. We have done some analysis recently that suggests there's a pretty broad set of employees who can stand to benefit from these practices. Overall, 38% of Gap Inc.'s recent hires could be considered opportunity youth. For some of our brands – like Old Navy – it is even higher.<sup>3</sup>

Because of this, we're figuring out how we can better support our employees by bringing some of what we do in This Way Ahead to more of them. We see This Way Ahead as a key talent strategy.

We give this advice to other employers all the time: do not underestimate the valuable talent you may be overlooking by relying only on traditional recruitment and training practices. Programs like This Way Ahead demonstrate that we do not need to choose between what is good for the community and what is good for business. We can have both at the same time, and create sustainable programs that benefit all of us.

<sup>3</sup> Based on data from July 2017 to January 2018 applying FSG's methodology for determining opportunity youth (i.e. filtering by age, by zip codes classified as low-income by the Federal Government Centers of Medicare and Medicaid Services, by lack of post-secondary degree, and by lack of recent employment history within the last 6 months).

Chairman SMITH. Ms. Shapiro, you may begin.

**STATEMENT OF JULIE SHAPIRO, EXECUTIVE DIRECTOR, THE DOOR, NEW YORK, NEW YORK**

Ms. SHAPIRO. Chairman Smith, Ranking Member Davis, and Members of the Subcommittee, I am honored to be with you today at this important hearing on jobs and opportunities. My name is Julie Shapiro, and I am the executive director of The Door in New York City.

For over 45 years, The Door has served as a vital resource for New York City's young people, including those facing homelessness, unemployment, poverty, and deportation. The Door's mission has always been to empower young people to reach their potential by providing comprehensive youth programs in a diverse and caring environment.

Each year, The Door works with nearly 10,000 young New Yorkers, ages 12 to 24. We offer comprehensive integrated programs free of charge, confidentially, and all under one roof. They include primary and behavioral healthcare; education; career training, and internships; creative arts programs; healthy meals and nutrition counseling; legal and immigration services; and supportive of housing.

The Door provides career and education services to 3,400 young people annually, 1,200 of whom are disconnected youth. We know that for many low-income young adults, three intertwined challenges impact their ability to gain a foothold in the labor market. They are: one, minimal educational attainment and basic skills; two, limited job opportunities; and, three, limited access to living wage career paths.

The retail industry, our Nation's largest employer, provides genuine opportunities to address these challenges, due to a willingness to hire young adults, low entry-level skill requirements, anticipated growth, and advancement opportunities. Part-time retail jobs provide flexibility to meet competing needs for immediate work and continued education, and these jobs build skills valued throughout the labor market.

For more than 15 years, The Door has been committed to tapping into the retail sector. Our longstanding, employer/nonprofit partnership with Gap Inc. has been the cornerstone of our pioneering retail sector training programs. We have been working together and building a team that finds solutions that work for Gap and for young people from the development of first pilot site at This Way Ahead in 2007 with 11 interns. This year, 11 years later, we are preparing to place 414 youth in internships across more than 60 stores in New York City and Westchester County. In 2019, we anticipate growing the program to 500 interns. As far as we know, this is the largest employer-led internship initiative in the entire company.

This Way Ahead internships are designed to provide youth with invaluable hands-on experience in the workforce, often for the first time. Participants gain essential and transferable job skills, as well as in-depth knowledge of the retail industry. Interns receive ongoing mentoring and supervision from store managers who have participated in related training. Participants are also encouraged to



take advantage of The Door's entire suite of support services to address any barriers they may face, so that they remain engaged in their internship. Our unique model ensures that anything a young person needs is available at The Door, from academic tutoring, to help applying to college, to healthcare.

The results have been remarkable to date. Over 11 years, of the more than 1,500 young people who have completed our training, 62 percent were offered internships, 89 percent of those completed their internships, and 72 percent of those received job offers. This Way Ahead graduates stay with the company twice as long as their peers and have higher engagement scores than their coworkers. Third party evaluations have demonstrated that This Way Ahead participants also improve their confidence and on-the-job skills.

Here is what I think is the best evidence of our success, and David mentioned this, but I think it bears repeating: 72 percent of program alumni from the first 10 years are currently employed in at least one paid job versus 55 percent of 16 to 24 year olds in the general U.S. population. Significantly, our partnership has paved the way for Gap Inc. to expand This Way Ahead to 32 additional U.S. cities.

This Way Ahead is a model of how companies and nonprofit organizations can collaborate to make an impact on the lives of thousands of disconnected youth. Many companies want to do the right thing and hire young people in the community. Our partnership with Gap Inc. shows this can be brought to scale, but only if there is a strong partnership with an experienced youth development organization.

I am grateful to Gap Inc. for their outstanding leadership and partnership, and I encourage the Subcommittee to look at ways to develop and fund programs like This Way Ahead. Thank you for your time.

Chairman SMITH. Thank you.

[The prepared statement of Ms. Shapiro follows:]

**TESTIMONY OF JULIE L. SHAPIRO**

Executive Director, The Door – A Center of Alternatives, Inc.  
New York, New York

House Ways and Means Subcommittee on Human Resources  
April 25, 2018

Chairman Smith, Ranking Member Davis, and members of the subcommittee, I am honored to be with you today at this important hearing on jobs and opportunities. My name is Julie Shapiro and I am the Executive Director of The Door in New York City.

For over 45 years, The Door has served as a vital resource for New York City's young people, including those facing homelessness, unemployment, poverty, and deportation. ***The Door's mission has always been to empower young people to reach their potential by providing comprehensive youth programs in a diverse and caring environment.***

Each year, The Door works with nearly 10,000 young New Yorkers, ages 12-24. 78% of our Door members identify as Black or Hispanic. Many of them face multiple personal and systemic barriers that hinder their ability to thrive. Our unique model is designed to support young people as they work to overcome these barriers. We offer comprehensive, integrated programs free of charge, confidentially, and all under one roof. They include: primary and behavioral health care; education and career training and internships; creative arts programs; healthy meals and nutrition counseling; legal and immigration services; and supportive housing.

Across the country, only one in four young people are employed—and the number of jobs available to teens and young adults continues to shrink. We know that youth unemployment, especially for young people of color, has long-term consequences. This includes lower wages and fewer work opportunities, resulting in a negative impact on economic mobility.

In New York City, this is a huge issue because there are over 136,000 disconnected young adults, who are neither in school nor working, between the ages of 16 and 24. Each year, The Door provides career and education services to 3,400 young people, and 1,200 are disconnected youth. We assist 800 youth to obtain an internship, or find a job. Nearly 50% of the disconnected youth with whom The Door works are dealing with multiple barriers to career and education success including transitioning out of the foster care system, juvenile justice backgrounds, homelessness, and/or being young parents.

**The Benefits of Youth Employment**

For many low-income young adults, three intertwined challenges impact their ability to gain a foothold in the labor market. They are: 1) minimal educational attainment and basic skills; 2) limited job opportunities; and 3) limited access to living wage career paths. The retail industry, our nation's largest employer, provides genuine opportunities to address these challenges, due to a willingness to hire young adults, low entry-level skill requirements, anticipated growth, high demand for staff, and advancement opportunities. Part-time retail

jobs provide flexibility to meet competing needs for immediate work and continued education, and these jobs build skills valued throughout the labor market.

Many studies have proven the immediate benefits of youth employment. Findings from the Youth Development Study, a long-term longitudinal study that followed a group of teens through early adulthood, found that there was “remarkable continuity in patterns of working and studying during high school and the years thereafter”. There was evidence that steady jobs that fostered a reasonable balance between school and work resulted in improved time management skills in college. Also, this type of job was beneficial for young people interested in joining the workforce after high school rather than immediately attending college.<sup>1</sup> Researchers from Northeastern University found that participation in Boston’s Summer Youth Employment Program had a positive impact on teens and young adults. They acquired job readiness skills (i.e. resumes, cover letters, and interview preparation); were more likely enroll in a four-year college; developed personal skills to manage conflicts and emotions; and had a better connection to their community, resulting in a decreased likelihood of engaging in delinquent behavior.<sup>2</sup> A 2014 study of New York City’s Summer Youth Employment Program found that high school participants’ school attendance and academic performance improved the year after they participated in SYEP.<sup>3</sup>

#### **This Way Ahead**

For more than 15 years, The Door has been committed to tapping into the retail sector. Our long-standing employer/nonprofit partnership model with Gap Inc has been the cornerstone of our pioneering retail sector training programs. We have been working together and building a team that finds solutions that work for Gap and for young people – from the development and first pilot site of This Way Ahead in 2007, with 11 interns. This year we are preparing to place 414 youth in internships across more than 60 stores in New York City and Westchester County. In 2019, we anticipate growing the program to 500 interns. As far as we know, this is the largest employer-led internship initiative in the entire country.

Our partnership has paved the way for Gap Inc. to expand the This Way Ahead model to ten additional U.S. cities and connect over 600 New York City youth to entry-level jobs. Additionally, Gap has shifted its hiring model such that by 2025, a total of 5% of all new entry level store employees will be This Way Ahead alumni.

This Way Ahead’s program model includes three components: training; the application/hiring process; and the internship.

- **Training:** The Door holds recruitment sessions for over 600 young people interested in the program. Young people find out via our recruitment flyers, schools and community

<sup>1</sup> “The Benefits and Risks of Adolescent Employment,” Jeylan T. Mortimer, Ph.D., January 2011.

<sup>2</sup> “The Potential for Summer Youth Employment Programs to Reduce Inequality: What Do We Know,” Alicia Sasser Modestino and Trinh Nguyen, Northeastern University, June 2016.

<sup>3</sup> “The Impact of Summer Youth Employment on Academic Outcomes,” Journalist’s Resource, Harvard Kennedy School, Shorenstein Center on Media, Politics, and Public Policy, August 2014.

partners, our marketing campaign (i.e. social media), and word of mouth. Young people who are accepted into the program first go through 4 weeks of training in basic customer service, professional development, and an introduction to the retail sector. Once they successfully complete this first phase, they move on to a 6-week "This Way Ahead Bootcamp Training" focused on preparing young people specifically for internships at Gap, Old Navy and Banana Republic stores.

- **Applying/Hiring:** Using the skills they learned in the training, young people apply for internships and are interviewed by store managers. They receive coaching and preparation from career coaches at The Door.
- **Internship:** A 12 hours per week for 10 weeks paid internship opportunity at a Gap Inc. store follows the first two components. These internships are designed to provide youth with invaluable, hands-on experience in the workforce, often for the first time. Participants gain essential and transferable job skills, as well as in-depth knowledge of the retail industry. Interns receive ongoing mentorship and supervision from store managers who have participated in training specific to TWA.

**Ongoing Retention Support:** Once a young person has been placed in an internship, they receive continued support and encouragement through group workshops, store check-ins, and individualized case management support. One of the strengths of The Door is that these young people work with the same job coach throughout the course of their internship. Our career development staff are experienced youth development professionals with training and access to resources for vulnerable youth. Participants are encouraged to participate in The Door's entire suite of support services to address any barriers they may face, and to ensure they remain engaged in their internship opportunity. For example, a young person in high school could meet with a college advisor for assistance on their college application, sharpen their leadership skills by leading a community service activity; or get subject-matter tutoring. A community college student can meet with a learning strategist for support on how to pass a remedial class, or develop a plan to transfer to a four-year college with one of our post-secondary coaches. If a young person has never had a physical, our staff accompany them to schedule an appointment at our Health Center. If they do not have consistent access to food, our staff will encourage the young person to stay for dinner after their appointment. Our unique model ensures that anything a young person needs is available at The Door.

**Transition to Permanent Employment:** After successful completion of their internship, youth have the opportunity to apply for permanent employment at a Gap Inc. store. Participants who secure a Gap Inc. job opportunity continue to receive one year of comprehensive job retention services to ensure they remain connected to the workforce, and persist and thrive within their employment opportunities.

The results have been remarkable to date. In 2017, 74% of This Way Ahead interns received job offers after completing their internships. This year we expect 85% of interns to successfully complete their internship, and at least 65% to be offered ongoing employment. This Way Ahead graduates stay with the company twice as long as their peers and have

higher engagement scores than their co-workers. Third party evaluations have demonstrated that This Way Ahead participants improve their confidence and on-the-job skills.

I spoke earlier about the short-term benefits of youth employment opportunities. I would like to end by pointing out a 2014 study by the Employment Policies Institute. It found that youth employment had an impact on participants 25-30 years after their internships ended, when individuals were in their 40s and 50s. It found that for high school students who had summer jobs in the late 1970s and 1980s, today their annual earnings are seven percent higher when compared to those who did not have summer jobs.<sup>4</sup>

This Way Ahead is a model of how companies and nonprofit organizations can collaborate together to make an impact on the lives of thousands of disconnected youth. Many companies want to do the right thing and hire young people in the community. Our partnership with Gap shows this can be brought to scale, but only if there is a strong partnership with an experienced youth development organization. The Aspen Institute has put a lot of thought into the important roles that youth development organizations can play as third party brokers to ensure young people succeed in their first jobs. In the words of many of my colleagues, “we need to meet young people where they are.”<sup>5</sup>

Today there are an estimated 4.6 million disconnected young people in the United States.<sup>6</sup> Our country’s lifetime underinvestment in them costs us \$4.7 trillion.<sup>7</sup> I am grateful to Gap for their outstanding leadership addressing this crisis, and I encourage the Subcommittee to look at ways to develop and fund programs like This Way Ahead.

Thank you for your time.

<sup>4</sup> “New Study Finds Teens’ Early Work Experiences have Long Lasting Career Benefits,” Employment Policies Institute, August 2014.

<sup>5</sup> “The Importance of a First Job,” Alison Decker, The Aspen Institute, November 30, 2016.

<sup>6</sup> “More than a Million Reasons for Hope,” Sarah Burd-Sharps and Kristen Lewis, Measure of America of the Social Science Research Council, March 2018.

<sup>7</sup> “The Impact of Summer Youth Employment on Academic Outcomes,” Journalist’s Resource, Harvard Kennedy School, Shorenstein Center on Media, Politics, and Public Policy, August 2014.

Chairman SMITH. Mr. Staub, you are recognized for 5 minutes.

**STATEMENT OF STEVE STAUB, PRESIDENT AND OWNER,  
STAUB MANUFACTURING SOLUTIONS, DAYTON, OHIO**

Mr. STAUB. Good morning, Chairman Smith and Ranking Member Davis—

Chairman SMITH. You might want to turn your microphone on there.

Mr. STAUB. Good morning, Chairman Smith, Ranking Member Davis, and Members of the Subcommittee on Human Resources, thank you for allowing me to be here today. I am Steve Staub, president of Staub Manufacturing Solutions in Dayton, Ohio, a business my sister and I started with the help of our father that specializes in manufacturing fabricated metal components and assemblies from everything from locomotives to agricultural equipment, and retail displays.

I care a lot about manufacturing in our country. That is why I am here today, and that is why I am proud to serve on boards of organizations like the Ohio Manufacturer's Association, or the OMA, and the National Association of Manufacturers, the NAM.

Nationwide, manufacturers employ more than 12 million people, as the NAM recently found in its manufacturing outlook survey. Since the tax reform was passed, the manufacturer's optimism is at an all-time high. At Staub, like many small- and medium-size manufacturers, we have been struggling in the past just to keep our doors open.

Now, since the debate and passage of tax reform, we have been able to invest in new equipment, expand our facility, hire new employees, and provide our people with bonuses and pay raises. There are many other examples like ours across the country. In fact, the NAM recently launched a new campaign, called Keeping Our Promise, that highlights these stories. But while manufacturers are growing and creating jobs, we are also having difficulty finding enough workers to fill those jobs.

Approximately 426,000 U.S. manufacturing jobs are going unfilled today, because there are simply not an enough qualified applicants to fill them. Over a 10-year period, that number is going to rise to 2 million if we don't do something now. So what can we do? Well, quite a few things, actually. Here are some basic points.

First, there is what groups like the NAM and OMA are doing. They are working hard to support the next generation of manufacturing workers through various incentives, and progress has been made, in particular, in encouraging veterans, women, and other underrepresented populations as well as showcasing the promise of manufacturing to America's youth.

Second, there is what manufacturing companies can do as an individual. At Staub, we have developed some recruiting strategies that may be considered somewhat unconventional. We have been working with a local anti-poverty agency, for example. And we have often welcomed team members to our finishing department with little or no skill, teaching them a trade and giving them plenty of opportunity for advancement. We believe in hiring for attitude and training for skill.

Not only is this the right thing to do for our communities, but we believe there is also a strong business case to take on harder to serve individuals as well. And the result of our efforts has led to improved employee retention and loyalty.

Third, there is work being done with local education institutions. I am very engaged in our local schools to get students involved in manufacturing. A few years ago, a group of us got together and started a nonprofit called Xtreme STEM to get kids excited about the manufacturing industry. We host robotic and 3-D printing competitions with names like Xtreme BOTS and Xtreme 3D.

Other opportunities include apprenticeships, various workplace learning opportunities, and certificate programs that combine classroom time with work experience. Our company, like many others, also offers 100 percent tuition reimbursement.

Fourth, there is what policymakers can do. Manufacturers appreciate the House passing the bipartisan Strengthening Career and Technology Education for the 21st Century Act. We hope it will pass the Senate soon, too. In addition, there is more that elected officials can do to help support communities like ours that have been impacted by the horrific and absolutely devastating opioid crisis.

When someone survives addiction, they need more help, they need tools and strategies to keep off drugs and get back into the workforce and stay employed. Finally, we need a continued commitment to the kind of programs—policies like tax reform that helped create today's manufacturing renaissance in the first place.

Manufacturing offers many promising career options, often without the financial burdens of college debt. And the average manufacturing worker earns about 27 percent more in wages and benefits than their peers. These well-paying jobs are in modern, high-tech, and a growing industry, and they are ready to be filled today. In fact, let me say this. Right now, we have \$500,000 in paid benefits and training to give away to five people, but we are having trouble finding those people.

Here is what I would say to your constituents: It is not difficult to get this money, just show up every day, be willing to learn, be drug-free, and we will teach you the skills that you need to know. I imagine countless other manufacturers around the country feel the same way and have the same opportunities. In the meantime, we are going to keep working hard to tackle the skills gap. We appreciate what you are doing. Thank you.

Chairman SMITH. Thank you, Mr. Staub.

[The prepared statement of Mr. Staub follows:]

## Testimony

of Steve Staub

President

Staub Manufacturing Solutions

*before the* U.S. House Committee on Ways and Means Subcommittee on Human Resources  
115th Congress

*on* Jobs and Opportunity: Employer Perspectives on the Jobs Gap

April 25, 2018



**Testimony of Steve Staub  
President of Staub Manufacturing Solutions**

**Before the**

**U.S. House of Representatives  
Committee on Ways and Means Subcommittee on Human Resources  
April 25, 2018**

Good morning, Chairman Smith, Ranking Member Davis and members of the Subcommittee on Human Resources.

I am Steve Staub, president of Staub Manufacturing Solutions in Dayton, Ohio. Thank you for the opportunity to be here to discuss jobs and opportunities.

**I. Introduction**

Dayton, Ohio, is one of the oldest, strongest and most innovative manufacturing regions in the nation. Not only is Dayton where we invented the electric starter, the cash register, the airbag, the parachute, the ice cube tray, the pop top can, the parking meter, the airplane and so much more, but this leadership continues today with 14.5 percent of the workforce in and around Dayton employed in manufacturing, and the region is home to more than 2,400 manufacturers.

One of those manufacturing companies is Staub Manufacturing Solutions, a family-owned business that my sister and I started with the help of our father in 1997. We are a manufacturing company specializing in the production of fabricated metal components and assemblies. We manufacture components for everything from cars to agriculture equipment, heavy trucks, construction equipment, locomotives, retail store displays, food equipment and much more.

I care a lot about manufacturing in our country, which is why I'm here today, and it's also why I am proud to serve on the boards of—and work closely with—organizations like The Ohio Manufacturers' Association, or OMA, and the National Association of Manufacturers, or NAM.

Nationwide, the manufacturing sector contributes \$2.25 trillion to the U.S. economy, employs more than 12 million men and women and—as I will outline in just a moment—is hiring and rebounding today in a big way.

**II. The State of Manufacturing**

As the NAM found in its most recent Manufacturers' Outlook Survey, conducted quarterly with first-quarter results released this month, optimism is very high among manufacturers around the country. The survey showed 93.5 percent of manufacturers expressing optimism about the future of their companies and the future of our economy. That's the second-highest reading on record, and it comes in the context of the first Manufacturers' Outlook Survey released since the enactment of tax reform. This is no accident. The dramatically improved business climate is due to, in many ways, a new pro-business attitude from Washington that has manifested itself in different forms, from regulatory relief to historic tax reform, and it's paving the way for economic growth and newfound optimism.

So, before I continue, let me take this opportunity to thank those who supported tax reform and the “rocket fuel” that it has provided to the manufacturing sector. Tax reform was long overdue, and what has happened at Staub Manufacturing Solutions is just one of many success stories resulting from a more competitive tax policy.

We, like many small and medium-sized manufacturers, struggled in the past just to keep our doors open. Now we enjoy a dramatically improved business climate. Indeed, our company has experienced amazing growth since the economy started to improve with tax reform unleashing many new opportunities and possibilities to grow. For instance, we have been able to invest in new equipment, make upgrades to our current facility, including the installation of energy-efficient LED lighting, expand our facility by purchasing the building next door, hire new employees and provide our people with bonuses and pay raises—something we could not do during the low growth years of the past.

Staub’s story is hardly unique. There are many examples across the country of how manufacturing companies are investing more, compensating more and hiring more thanks to tax reform. In fact, the NAM recently launched a new blog series called “Keeping Our Promise,” which highlights the incredible work manufacturers are doing across the country due to tax reform. I hope you will check it out. The first company highlighted, I am proud to say, is a fellow Ohio manufacturing company—Ariel Corporation, not too far from Dayton—which is further improving pay and benefits for its employees thanks to tax reform.

However, there is another side to this brighter economic outlook. Manufacturers are growing and creating jobs, adding 22,000 workers nationwide in March and extending the 32,000-employment gain in February. While employment in the sector is rising by a robust 18,733 per month on average since the end of 2016—a significant turnaround compared to the sluggish job growth in 2016—we are having difficulty finding enough workers to fill those jobs, which is a real problem for our industry.

Indeed, in the very same NAM survey I just mentioned, while manufacturers may be very optimistic overall about the future, they have real concerns about their ability to attract and retain the manufacturing workforce they need to keep growing. In fact, respondents to the survey cited this as their number-one concern.

This challenge, which has frustrated manufacturers for many years, is becoming even more pronounced in today’s better economic climate.

Obviously, a bright economic outlook and low unemployment rates are good problems to have. It’s a sign that the economy is not only healthy again but growing. But too many workers remain on the sidelines—especially males without a college degree—and we need to do everything we can to bring them and as many people as we can, including women, into the manufacturing workforce.

### **III. The Workforce Issue**

Currently, the most desperate needs of the manufacturing workforce remain in skilled professions like welding and machining as well as a need for production and maintenance technicians. To be a welder requires time in a professional program, a certification and lots of training. Good welders are highly coveted, and the pay is close to the top in the skilled trades. It’s not easy work, but manufacturing provides a stable income, leadership opportunities and life skills that can transform individuals and families. We have numerous highly skilled welders, but

you might remember one of our welders, Corey Adams. Corey joined our team a few years ago with no formal skills, but he had a great attitude. Today, Corey's trade supports a wonderful family, a new home and savings for his family's future. Corey came to Washington earlier this year to sit with my sister and me during the State of the Union address. We had the honor of being chosen to sit in the first lady's box, and Corey may now be the most famous welder in the United States. It was a humbling experience, and one that I will never forget. And it was amazing for my family, friends and colleagues in manufacturing. Never had a manufacturer been highlighted so positively in a president's State of the Union speech. Manufacturing is in the spotlight, and it's awesome.

Today's manufacturing industry is modern, high tech, alive and growing, and it offers many promising career options—often, I should add, *without* the financial burdens that students and families face today. In many cases, a well-paying manufacturing job may only require a high school education and on-the-job training. Other jobs may require one or two years of vocational training or work toward an associate's degree. The average manufacturing worker earns about 27 percent more in wages and benefits than the average worker across all sectors.

And yet, approximately 426,000 manufacturing jobs across the nation are still going unfilled because there simply are not enough qualified applicants to fill them. According to Deloitte and The Manufacturing Institute, that number is expected to jump to approximately 2 million unfilled jobs by 2025.

So, this is a big problem and one with the potential to get even bigger unless we address it, but how did it arise?

It's a good question. The skills gap is not a new issue, but one that has come into greater view because many workers remain on the sidelines in a strong economy. Unemployment is down, but so is labor participation. Contributing to the low labor participation rates include individuals who might have left the workforce during the 2008 downturn with no plan to return to their previous profession. Some might have retired or became self-employed, and others may face more serious struggles with addiction and poverty. In other cases, individuals may feel trapped in lower-wage jobs and can't find a path to get the skills they need to get started in today's most in-demand manufacturing careers.

There is no single explanation, but many factors contribute to the challenge. The real question before us is what to do about it.

**Many groups like the NAM and OMA have committed resources and spent time developing the next-generation manufacturing worker through various programs, engagement strategies and collaborative solutions.**

When manufacturers combine their talents and resources and align priorities, great things can happen. Progress has been made to excite people about manufacturing jobs, such as recruiting veterans, women and other underrepresented populations as well as showcasing the promise of manufacturing to America's youth through events like national Manufacturing Day. In Ohio, we are setting up Industry Sector Partnerships throughout the state. These partnerships are an industry-led workforce development strategy that brings together educators and the public workforce system. This is no easy task, but it's a challenge we have accepted and why I am here today.

**Then, there is what manufacturing companies can do on an individual level.**

At Staub Manufacturing, we are working hard to tackle the workforce challenge headfirst and have developed some recruiting strategies that may be considered less conventional than going to a traditional career fair. We have been working with a local anti-poverty agency, for instance, on a program called Getting Ahead. It is designed to help those in poverty create a personalized plan for economic stability so that participants can move to self-sufficiency and break the cycle of poverty.

We often welcome team members to our finishing department with little or no skill. We work with them to teach a trade and give them plenty of opportunities for advancement. One of the biggest things that we provide is hope. My personal belief is that many folks in a transitional situation don't enjoy the feeling of hope for their futures, they don't see a way out from their personal situations, and many times, they are not sure what to do about it. However, I believe that when people have a steady job, they begin to have hope and see a pathway to the future that is much brighter than their current situation.

We have been successful in recruiting, training and employing individuals whom some other employers may not even consider because the upskilling is too much of an effort or there is a perceived risk associated with someone who has had some personal challenges to overcome.

My sister and I believe there is a strong business case to take on harder-to-serve individuals, and the result of our efforts has led to improved employee retention and loyalty. Also, this approach is the right thing to do, not just for ourselves but also for our communities. When we are working with all members of our community and helping provide meaningful work to individuals and teaching skills for life, people take pride in that type of workplace culture and strive to do their best. To our family, it's a win-win.

And yet, even with all the strategies we've employed at Staub, we still have several open positions.

**That's why we continue to work with local educational institutions to tackle this problem as well. It's another successful strategy to address the workforce issue and one I strongly encourage.**

I am very engaged in our local schools to get middle school and high school students interested in manufacturing. A few years ago, a group of us who care about the workforce of the future got together and started a nonprofit called XtremeSTEM to get kids excited about the manufacturing industry. We host robotic and 3D printing competitions, with names like XtremeBOTS and Xtreme3D, and about 400 kids attend each event. For the XtremeBOTS, each high school team gets a remote control and a motor. The team designs its own bot and is paired with a local manufacturing company for mentorship and help building the bot. What the teams come up with is truly amazing! But more importantly, participants learn to work together as a team and solve problems, and they learn what manufacturing is really about! For the middle school kids, we started a 3D printing competition where they can show up and print their own hovercrafts to compete against other kids. Through XtremeSTEM, our goal is to provide hands-on programs that engage students in Science, Technology, Engineering and Mathematics (STEM) disciplines, along with a path to manufacturing careers.

Other opportunities include apprenticeships, various work-based learning opportunities and certificate programs that combine classroom time with work experience. Because of expanding partnerships between employers and educators at all levels, there are more and more

opportunities for young people and adults to learn the skills needed on the job, while also working toward a certificate or degree that positions an individual to keep advancing in his or her career. And if young workers master the front lines of production and excel to seek greater responsibilities, there is nothing stopping them from further pursuing additional higher education opportunities. Our company offers 100 percent tuition reimbursement, and many, if not most, manufacturing employers around the country support and sponsor their employees when it comes to upskilling.

I urge every employer that is facing a workforce shortage to be involved with schools and students and to get involved with a program like XtremeSTEM in your area. It is an important engagement opportunity that cannot be overlooked and, I would argue, is no longer optional. There are great careers ahead in manufacturing, but we just can't talk about these jobs. We must show others, especially young people, their parents and teachers, what these jobs are about and why they are important to the economy. Building positive relationships with educators as well as their parents and other adults can only help close the skills gap and direct more young people into manufacturing careers. In many ways, this is a generational challenge that requires all hands, not just government policymakers, to build the modern manufacturing workforce.

**That does not mean, however, that there is no role for policymakers in this discussion—far from it. We really do need your help.**

There is a role for Congress to help facilitate, for instance, our access to the best and brightest who are eager and willing to work in modern manufacturing. Manufacturers appreciate the House passing the bipartisan H.R. 2353, the Strengthening Career and Technical Education for the 21st Century Act, also known as the Carl Perkins Career and Technical Education bill. This legislation enables resources for secondary schools and community colleges to teach manufacturing skills among other technical trades and allows for the purchase of the right training equipment so that our next generation can learn and do what they set out to accomplish. However, the Senate has not yet acted on a Perkins bill, and we hope that legislation will pass when it is brought to the Senate floor. I know those things are easier said than done, but it's critical to the educators and employers who are working together to prepare our next-generation workforce.

In addition, there is more that elected officials can do to help support manufacturing communities like ours that have been impacted by the horrific and devastating opioid crisis. There are no words that can describe the harm opioids and heroin overdoses have caused to many Ohioans. I've seen the devastation firsthand as the son of a good friend overdosed on opioids in his bedroom at his parents' house. This young man had a promising future and will be missed. When someone survives addiction, we need that person in the workplace because the jobs are available. However, we are going to need tools and strategies to keep these individuals off drugs as well as strong support networks so that they can make good choices in life and stay employed. We are working with a local drug recovery program to provide jobs and give hope to some of these folks who lost their way—but it's not easy. The success rate is not 100 percent, but we are making progress.

And, of course, what we also need from Washington is a continued commitment to the kind of pro-growth policies that helped create today's manufacturing renaissance in the first place. Tax reform was a huge step forward, and we are very thankful for it. Regulatory relief continues to be a boon as well. Now, we believe Washington must also address things like the significant

infrastructure challenges facing the entire country, expand overseas trade and devise better immigration solutions that work for employers and their communities.

Because while providing jobs and opportunity as well as celebrating the dignity of work are important to my sister and me as an employer and manufacturer in Dayton, we can only continue to do this if we are successful and the economic conditions continue to support manufacturing in America.

#### **IV. Conclusion**

Manufacturing is back in the United States.

The prospects for growth in the manufacturing sector and for the larger economy are very strong. We are growing, investing and hiring. And, while we face significant workforce challenges, I believe they can be solved by working together and applying even greater focus to the problems at hand.

Put simply, my goal is to keep Americans employed and off drugs and to have as many Americans as possible share in the economic success that the manufacturing industry provides.

Technology is going to change some jobs and create new opportunities. We need to be not only open to these shifts but also plan for them. The demand for people with knowledge and skills to harness the power of new processes and new innovations will drive new opportunities in fields such as virtual reality and robotics.

I know the subcommittee has a bipartisan appreciation for the difficulties employers face when it comes to developing and retaining our workforce. I thank you for working hard to address them. If any of you are ever going to be in the Dayton, Ohio, area, I would love for you to give me a call, come by for a company tour and have further conversations.

Thank you again for the opportunity to be here today.

Chairman SMITH. Dr. Lustig.

**STATEMENT OF DAN LUSTIG, PSY.D. CAADC MISA II, PRESIDENT AND CEO, HAYMARKET CENTER, CHICAGO, ILLINOIS**

Mr. LUSTIG. Good morning, Chairman Smith, Ranking Member Davis, and Members of the Subcommittee. Thank you for allowing me to testify this morning. My name is Dr. Dan Lustig. I am the president and CEO of Haymarket Center in Chicago. It is the largest and most comprehensive provider of treatment for substance use and mental health disorders in Chicago, founded in 1975 by Father Ignatius McDermott.

Haymarket Center has grown to serve over 12,000 individuals annually in over 30 specialized treatment programs and work development programs. Haymarket Center serves individuals suffering from addiction, especially those presenting with histories of unemployment, homelessness, criminal justice involvement, trauma, and mental illness. Haymarket Center's recovery support infrastructure helps clients sustain recovery, minimize relapse, and improve overall quality of life, through its onsite provision of services that go far beyond the scope of most treatment programs. For example, with family medicine and psychiatry, child care, and job training.

Problems with employment are common among individuals with substance use disorders, yet comprehensive vocational services are not generally available to them, and vocational interventions are often not matched to their specific needs. Substance use and other barriers have been identified as an important problem to address among the hard-to-employ TANF recipients and other entitlement programs.

A diverse set of factors have been identified as potential barriers to employability. These include situational factors, such as transportation; human resource factors like low literacy or low job skills; and personal problems, such as domestic violence or substance use disorders.

Studies indicate that the presence of these barriers, and especially the co-occurrence of multiple barriers, is associated with lower likelihood of employment. Over the past two decades, there have been numerous programs attempting to add additional requirements on a vulnerable population without understanding that all barriers to employment must be addressed and in place for individuals to be successful.

In general, low-income individuals and users of public benefits do not have substance use disorders at a higher rate than the general public. It is just that when they do, it is very clear that they have fewer resources to address them.

In 2011, Haymarket Center received a Pathways to Responsible Fatherhood grant from the Administration for Children and Families to serve low-income fathers in Chicago who are both entering treatment for substance use disorders and estranged from their children because of their drug use. The project enrolled over 1,300 fathers. Most of these fathers resided in low-income communities on the south and west sides of Chicago. These neighborhoods have the highest murder rates and drug arrest rates in the Nation. All

of these fathers served through the program had complex problems in addition to their substance use disorders.

Other barriers included involvement in the criminal justice system, unemployment, lack of housing, little to no work history, low educational levels, multiple children from different mothers, and co-occurring mental illness and other chronic diseases. Of the participants that we enrolled, 61 percent were African American, 8 percent Hispanic, 27 percent White; 46 percent of the sample had GED or a high school diploma; 64 percent were never married; 74 percent had a family history of substance use; 48 percent lived below the federal poverty level; 55 percent were currently involved in the criminal justice system; 64 percent report being victimized as children and young adults; 39 percent were reported severe victimization, including weapons; 76 percent reported extensive history of running away and period of homelessness; 48 percent reported use of alcohol and drug use under the age of 15; 29 percent reported history of depression and suicidal ideation; 73 reported a history of profound trauma.

This representative sample demonstrates that many of the individuals have multigenerational barriers, that if we do not continue to wrap around services around this population, they will not be able to achieve a stable employment history. Over the course of the past two decades, there have been two specific times when the government attempted to place work requirements on this vulnerable population, both times failing in that they did not address the barriers to sustain employment.

Our program at Haymarket Center, once their addiction was stabilized, fathers were able to focus and meet the demands of sustained work. Fathers began job readiness training program by meeting with a vocational counselor who administered a vocational assessment, health questionnaire, and criminal background check. The vocational counsel then worked with clients to develop an individual employment plan, informed by the assessments. This IEP actually helped individuals get connected to employment, that connected to a lot of different resources that were not previously available to them because their addiction and other illnesses and other conditions were not stabilized.

In general, it is absolutely critical that we wrap services around individuals if we look at increasing work requirements. Right now, the work requirements will take enormous resources that many States don't have. And it is important that the Federal Government continue to support government supported programs and resources as we move forward. Thank you.

Chairman SMITH. Thank you, Dr. Lustig.

[The prepared statement of Mr. Lustig follows:]





# Haymarket Center

**COMPREHENSIVE BEHAVIORAL HEALTH SOLUTIONS**  
FOUNDED IN 1975 BY MSGR. IGNATIUS McDERMOTT AND DR. JAMES WEST

Testimony

US House of Representatives

April 25<sup>th</sup> 2018

## Haymarket Center: Overview

Haymarket Center is the largest and most comprehensive provider of treatment for substance use and mental health disorders in Chicago. Founded in 1975, Haymarket Center has grown to serve over 12,000 individuals annually in over thirty specialized treatment programs and on-site supportive services.

Haymarket Center serves individuals suffering from addiction, especially those presenting with histories of unemployment, homelessness, criminal justice involvement, trauma, and mental illness.

Haymarket Center's recovery support infrastructure helps clients sustain recovery, minimize relapse, and improve overall quality of life, through its on-site provision of services that go far beyond the scope of most treatment programs -- for example with family medicine and psychiatry, child care, and job training.

Problems with employment are common among individuals with substance use disorders, yet comprehensive vocational services are not generally available to them, and vocational interventions are often not matched to their specific needs. Substance use and other barriers have been identified as an important problem to address among the hard to employ TANF recipients and other entitlement programs. A diverse set of factors have been identified as potential barriers to employability. These include situational factors such as transportation, human resource factors like low literacy or low job skills, and personal problems such as domestic violence or substance use disorders. Studies indicate that the presence of these barriers, and especially the co-occurrence of multiple barriers, is associated with lower likelihood of employment. Over the past two decades, there have been numerous programs attempting to add additional requirements on a vulnerable population without understanding that all barriers to employment must be addressed and in place for individuals to be successful. In general, low income individuals and users of public benefits do not have substance use disorders at a higher rate than the general public, it just when they do, it is very clear that they have fewer resources to address them.

## Fatherhood Program and Job Assistance

In 2011, Haymarket received a "Pathways to Responsible Fatherhood" grant from the Administration for Children and Families/Office of Family Assistance to serve low-income fathers in Chicago, who were both entering treatment for substance use disorders and estranged from their children because of drug use. The project enrolled 1,322 fathers.

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[www.hccenter.org](http://www.hccenter.org)

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Most of the fathers resided in low-income communities on the south and west sides of Chicago. These neighborhoods have the highest murder rates and drug arrest rates in the nation. All of the fathers served through the program had complex problems in addition to their substance use disorders. Other barriers included: involvement in the criminal justice system, unemployment, lack of housing, little or no work history, low educational levels, multiple children from different mothers, and co-occurring mental illness and other chronic diseases.

Among the participants:

- 61 percent were African American, 8 percent Hispanic, and 27 percent white;
- 46 percent of the sample had a GED or high school diploma;
- 64 percent were never married;
- 74 percent had a family history of substance use;
- 48 percent lived below the federal poverty level;
- 55 percent were currently involved with the criminal justice system;
- 64 percent report being victimized as children and young adults;
- 39 percent reported severe victimization involving weapons;
- 76 percent reported an extensive history of running away and periods of homelessness;
- 48 percent reported first use of alcohol and drugs under the age of 15;
- 95 percent had physical health problems;
- 29 percent reported a history of depression and suicidal ideations;
- 73 percent reported a history of profound trauma; and
- 82 percent met the clinical criteria for a mental health disorder.

This representative sample demonstrates that wraparound services are required in order to achieve a stable employment history. Over the course of the past two decades, there have been two specific times when the government attempted to place work requirements on this vulnerable population; both times failing because they did not address the barriers to sustained employment first.

#### The Program

Once their addiction was stabilized, fathers were able to focus and meet the demands of sustained work. Fathers began job readiness training by meeting with a vocational counselor, who administered a vocational assessment, health questionnaire, and criminal background check. The vocational counselor then worked with the client to develop an individual employment plan (IEP) informed by the assessments. The IEP included an inventory of their readiness to work, work experience, education, certifications and other trainings. The IEP also contained a job search action plan, which included detailed steps the fathers needed to take to secure employment. The IEP included enrollment in a 10 session job readiness training curriculum that was offered four days a week for a total of four weeks at Haymarket.

The curriculum was designed specifically for individuals in early recovery from substance use disorders and with criminal justice backgrounds. It taught fathers how to explain gaps in their work history during an interview, advised them of their HIPAA privacy rights as it relates to discussing their substance use disorders with employers, and taught them how to fill out job applications and to answer questions related to criminal backgrounds. The curriculum also helped fathers develop a resume. Because many fathers did not have access to a computer and had little experience in developing a resume, vocational counselors provided them with

templates where they could write their previous work experience, education, job skills and other information. The vocational counselor, job developer, and vocational case manager then typed the father's resume based on their written responses on the template.

The fathers reviewed their resumes with a vocational counselor or job developer who made edits to meet their employment objectives. For some clients, the process took two to three hours.

A key component of the curriculum was a week of mock interviews. Fathers were expected to dress in business attire during class while they were being trained to participate in interviews. Haymarket's Family Enrichment Center operates a clothing closet with suits, ties, dress shirts, shoes and other accessories donated from local clothing stores and Haymarket staff. This has been an enormous help to fathers who lack income and don't have access to interview clothing.

Because of their long histories of substance use, criminal backgrounds and inability to support their families, many of the fathers enrolled in job readiness training lacked confidence and self-esteem. To help them succeed in interviews, vocational counselors provide ongoing counseling and mentoring to build their self-confidence and help address self-esteem issues.

Clients who completed job readiness training typically went on to enroll in a 10-session computer training program. The purpose of the computer training curriculum is to help fathers develop the skills they need to search for jobs online, begin to develop cover letters and edit their resumes using standard word processing programs, and receive correspondence from employers via email. Haymarket operates a computer lab on-site dedicated to improving computer literacy skills in individuals in recovery from substance use and mental health disorders.

Fathers who completed the job readiness training and computer training classes next enrolled in our Job Club, which was facilitated by the job developer. The class met weekly and attendance was required to obtain subsidized employment through our Recovery Works program and to learn about new opportunities for unsubsidized employment.

Once fathers were employed, they could schedule individual counseling and mentoring for help in developing a personal budget, opening up a savings account, obtaining direct deposit, and guidance on how to view their bank statements on-line. Because money is a trigger for fathers in early recovery from substance use disorders, fathers also attended a relapse prevention counseling session offered by a certified alcohol and drug counselor.

#### **Job Placement**

During the four year grant program, 111 clients were placed in full time employment, 25 in part time employment, and 111 in subsidized employment. The number of clients placed in unsubsidized employment reflects the difficulty in placing the fathers in employment due to long histories of unemployment, extensive criminal backgrounds and the fact that over 55 percent were also involved in the criminal justice system (i.e., either on parole or probation), and the reluctance of employers to hire these individuals.

This testimony has solely focused on the workforce components of Haymarket's Pathways to Responsible Fatherhood program, but the program had other components as well. While the fathers received care, a separate team worked with the families they left behind to address their needs and prepare a stable environment for all members of the family once the father returned. The table on the following page summarizes all of the programs outcomes that involved the mothers and children who were involved in the program.

**Summary of Outcomes**

The table below provides results of Haymarket's Pathways to Responsible Fatherhood program for 1,322 participants during the period September 29, 2011 to September 28, 2015.

<b>Improvement in Healthy Relationships</b>	
Improvement in Abuse Prevention Skills	99%
Hopeful about Life Improving in Future	98%
Improvement in Conflict Resolution Skills	88%
Improvement in Communication Skills	87%
Improvement in Relationship with Spouse/Partner	77%
Improved Attitudes Towards Marriage or Commitment	75%
Improvement in Budgeting/Financial Skills	59%
<b>Improvement in Responsible Parenting</b>	
Hopeful about Life Improving in Future	99%
Improvement in Parenting Knowledge and Skills	90%
Improvement in Commitment to Fatherhood	89%
Improvement in Relationship with Children	87%
Improvement in Amount of Contact with Children	72%
Improvement in Knowledge of Child Support Enforcement	78%
<b>Improvement in Economic Stability</b>	
Obtained Full Time Unsubsidized Employment	111
Obtained Part Time Unsubsidized Employment	25
Obtained New Qualifications	10
Obtained Subsidized Employment	111
Showed Commitment to Family Financial Responsibility	99

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Chairman SMITH. Mr. Johnson, you may begin.

**STATEMENT OF GLENN JOHNSON, MANUFACTURING WORK-FORCE DEVELOPMENT LEADER, BASF CORPORATION, HOUSTON, TEXAS**

Mr. JOHNSON. Thank you, Chairman Smith and Ranking Member Davis for allowing me to testify today and to the rest of the Committee. BASF is the second largest producer of chemical products in North America. At BASF, we create chemistry for a sustainable future. Sustainability includes the environment and the economy but also people, and that is what I am here to talk about today.

Some say that jobs in manufacturing are dead-end jobs. But I am here today to testify that these jobs do not have a ceiling; they have options. Some of us prefer the exciting, hands-on aspects of technology roles, and some seek administrative work. Manufacturing provides opportunities for both, today.

Ms. Jana Truett was a cashier in a pharmacy when she decided to get her associate's degree in process technology. She began work with BASF as an operator and now trains others in technology. Ms. Jalisa King was a cook when she decided to get her associates degree. She is now an operator and part of our ambassador team, telling her story to other young women. Ms. Tara McMahon worked in a rec center. After completing her associates degree, she now works as a laboratory technician.

I, personally, 22 years ago, was a proud young man living in a trailer park in western Kentucky with only a high school diploma whenever I began my first manufacturing job. I ran assembly lines, and stacked cases of product. And as I worked through the ranks, I took advantage of a tuition reimbursement program. I progressed into leadership roles while continuing to train and educate, with the support of my manufacturing employer. That proud man from the trailer park sits before Congress today to tell you that the manufacturing industry changed my life, and it changes people's lives in the same way every day.

Recently, there has been national discussion about the jobs gap. However, if we are to solve this issue, we must treat the root cause, not the symptom. The lack of skilled workers, for example, is the symptom. The root cause, however, is much more basic. In this country, we have allowed a narrative to develop that the best jobs are no longer in manufacturing. From parents and teachers to fictional characters portrayed on television, the way we talk about certain careers has led to a lack of interest in them, and we compound the problem by leaving information out during counseling. We tell kids: Dream big; you can do anything you want.

And although I believe this general direction to be correct, it is profoundly incomplete. If a thousand children dream to have a job that has two openings, 998 of them will be unemployed, even if they are all straight A students. Countless stories about graduates that cannot find jobs have become a norm, seemingly accepted by society.

Coexisting with this norm is the fact that industries like manufacturing simply cannot find enough workers for jobs that most often pay more, have better benefits, and are in every way as pro-

fessional of a career than the jobs that these unemployed and misinformed Americans sought. We must assure that job availability is a part of the counseling we provide to students, transitioning veterans, and other retooling adults whenever they are making education and training decisions.

Collaboration with our industry partners is pivotal in regional and national workforce development strategy. Instead of BASF creating a pipeline for our own needs, we work with our industry partners to determine the needs of the region to create a workforce pipeline that supplies us all. Within the East Harris County Manufacturers Association in Houston, Texas, BASF joins with 12 colleges and 130 manufacturing and contractor companies to identify the critical crafts for that region and agree on the competencies needed.

Within the National Association of Manufacturer's "Dream It Do It" platform, BASF joins with multiple industry partners, where in 2017 alone, in one area of the country, we delivered what we referred to as the manufacturing value proposition to over 11,000 students and over 1,600 teachers, parents, and other community representatives.

Within the North American process technology alliance, BASF joins 49 colleges, 22 industrial organizations, and 19 vendors across America. Here we focus on curriculum and instructor skills for the process technology associate's degree.

We can no longer hit the snooze button on the jobs gap. We must change our messaging to entice workers to seek jobs that are readily available. We must create education success metrics that indicate if we are filling the jobs most needed for America's sustainability, not just how many people have 4-year degrees.

The Department of Labor must provide job projections directly to the Department of Education within an aligned and specific strategy to guide education funding pursuit, as well as spending decisions for program development incentives.

Chairman SMITH. Thank you, Mr. Johnson.

[The prepared statement of Mr. Johnson follows:]

**Testimony**  
**of**  
**Glenn E. Johnson, M.A.**  
Manufacturing Workforce Development Leader  
BASF Corporation

before the

Subcommittee on Human Resources  
of the House Committee on Ways and Means

Hearing on “Jobs and Opportunity: Employer Perspectives on the Jobs  
Gap”

1129 Longworth House Office Building  
April 25, 2018  
11:30 a.m.

## BASF

In the United States, BASF has operations at 148 locations in 29 states and has more than 15,000 employees. We are dedicated to hiring and developing people in a wide range of roles, including operations, engineering, research, development, and marketing. We support a variety of education initiatives to help fill the workforce pipeline. In 2017, BASF contributed more than \$5 million to non-profit organizations supporting communities where we work and live throughout the U.S.

## Manufacturing Jobs Can Take You Anywhere

There are those who would say that jobs in manufacturing are dead-end jobs, but I am here today to testify that that these jobs do not have a ceiling, they have options. Some of us in manufacturing prefer the live exciting hands-on aspects of technology roles in manufacturing and choose to make a lasting career in these ever-important positions. Some seek to move into administrative work. Manufacturing provides opportunities for both, today.

- Ms. Jana Truett
  - Was a cashier in a pharmacy when she decided to get her associate degree in process technology. She began work with BASF as an operator and now trains others in technology.
- Ms. Jalisa King
  - Was a cook when she decided to get her associate degree. She is now an operator in BASF and part of our Ambassador team telling her story to other young women.
- Ms. Tara McMahon
  - Worked in a recreation center. After completing her associate degree, now works at BASF as a Laboratory Technician.
- Glenn Johnson
  - 22 years ago, I was a proud young man living in a trailer park in western Kentucky with only a high school diploma. At that time, I began my first job in manufacturing. I ran assembly lines and stacked cases of product. As I worked through the ranks, I began to take advantage of the tuition reimbursement program. I progressed into leadership roles while continuing to train and educate with the support of my manufacturing employer. That proud man from the trailer park sits before Congress today to tell you that the manufacturing industry changed my life and continues to change people's lives in the same way, every day.

## Strategy for Workforce Development

Important to Talent Acquisition is our pursuit to seek the best candidates. But Talent Acquisition begins with a strategy of enticing the best candidates to seek us. This includes direct involvement in all stages of workforce preparation; building continuous and meaningful relationships with workforce potentials and organizations, and providing continuous opportunities to deliver the Manufacturing Value Proposition to potential job candidates. Three directives drive our Manufacturing Workforce Development program:

- Quantity – Drive Career & Technical Education Awareness
- Quality – Cultivate Nested Educational Partnerships
- Synergy – Leverage Government and Industrial Partnerships

## Quantity of Workers and the “Jobs Gap”

Recently, there has been national discussion around the “Jobs Gap.” There are numerous studies announcing the shortage of American workers that possess hireable skills within manufacturing and other industries with technology roles. However, if we are to solve this issue, we must treat the root cause, not the symptom.



The lack of skilled workers, for example, is a symptom. The root cause however is much more basic. In this country we have allowed a narrative to develop that the "best" jobs are no longer in manufacturing, but in white-collar, office settings – although these jobs are also essential to manufacturing. Simply put, the way everyone from actual parents and teachers to fictional characters portrayed in movies and television talk about certain careers has led to a lack of interest in these careers. Furthermore, we compound the problem by leaving information out during counseling.

#### The Incomplete Message

We tell kids to "dream big, you can do anything you want." Although I believe this general direction to be correct, it is profoundly incomplete. If 1,000 children dream to get a job that only has 2 openings, 998 will be unemployed – even if they are all "straight-A" students.

Countless stories about graduates that cannot find jobs have become a norm, seemingly accepted by society. Coexisting with this norm is the fact that industries, like manufacturing, simply cannot find enough workers for jobs that most often pay more, have better benefits, and are in every way as professional a career than the jobs these unemployed and misinformed Americans sought.

- According to the Bureau of Labor Statistics, manufacturing is one of the most stable and secure careers with the average tenure of employees being nine years—the highest among all private sector industries.
- Manufacturing jobs pay well. The average manufacturing employee earns nearly \$20,000 more per year than the average employee of other industries. (source: Bureau of Economic Analysis and Bureau of Labor Statistics)

We must assure that job availability is a part of the counseling we provide to students, transitioning veterans, and other retooling adults when they are making education and training decisions. This quantity aspect is only the beginning of what we refer to as, "the workforce development equation." Individual companies – or even national trade associations such as the National Association of Manufacturers (NAM) – cannot solve this problem alone. There is a role for government leaders at different levels to play in addressing this issue.

#### Career & Technical Education (CTE) Awareness

Within CTE we endeavor to grow the pipeline of workforce potentials. Surveys report that 52% of all teenagers say they have no interest in a manufacturing career. However, the data also show that the most influential factor for students deciding what career to pursue is "personal experience" (to what they have been exposed). This drives our need to do more to familiarize these workforce potentials with jobs in manufacturing technology. Since 2010, more than 380,000 schoolchildren in grades K-12 have participated in science education programs offered by BASF.

In elementary school, BASF Kids Lab opens student's eyes to chemistry. In the high schools, BASF Tech Academy enlightens students to successful career paths in manufacturing. In community and technical colleges, initiatives like the BASF FLAME (Female Leaders Advancing Manufacturing Excellence) program, develops women's advancement by connection them to a growing vital network of mentors and colleagues.

- BASF Employee Resource Groups (ERGs) lead the way as Manufacturing Ambassadors within CTE activities. These groups focus on specific diversity segments and are uniquely qualified for outreach in these areas. Part of BASF's workforce development vision is that people of diverse backgrounds see us as a company that doesn't just seek to be, but is, diverse and sees value in being so.

#### The Workforce Development Equation

Hypothetically, let's say that one of our BASF site leaders determines that she needs three electrical technicians per year over the next five and 10 years. To hire three technicians, we must credential three. However, to credential three we must enroll six, because not everyone completes the program. However, to enroll six we must speak to 15, because not everyone is convinced to choose this path.

If we operate in such an isolated way, we are not considering the demand for the same job by our regional industry partners. It is unlikely our site would acquire the talent necessary to supply our demand because it is likely that some of these workers will be hired by other companies. Consequently, collaboration with our industry partners is pivotal to regional or national workforce development strategy. Instead of BASF creating a pipeline for our own needs, we work with our regional partners to determine the needs of the region to create a workforce pipeline that supplies us all.

#### Collaborative Synergy

Initial efforts within workforce development must be to join or create collaborative partnerships. In BASF we seek these partnerships in every opportunity. For example:

- Within the East Harris County Manufacturers Association in Houston Texas, BASF joins forces with 12 colleges and 130 manufacturing and contractor companies. We identify critical crafts and agree on the competencies needed to assure we supply the quantity and quality of workers needed for the region.
- Within the National Association of Manufacturers' "Dream It Do It" platform, BASF joins multiple industry partners where, in 2017, we delivered the Manufacturing Value Proposition to 11,342 students and 1,690 teachers, parents, and other community representatives.
- Within the North American Process Technology Alliance, BASF joins 49 Colleges, 22 Industrial organizations, and 19 Vendors across America. Here we focus on curriculum and instructor skills for the Process Technology associate degree. This organization demonstrates the return on investment achievable within collaborative efforts.
  - Dr. Robert Bartsch and I published a research paper in *The Journal of Technology, Management, and Applied Engineering* titled "Comparing Process Technology Education and Work Experience" that demonstrates strong statistical evidence pointing toward collaborative value.
  - Within this degree we found that one year of training is approximately equal to 5.3 years of work experience. This is not to suggest that one year of education in general is equal to five years of experience. However, when industry and education partner to align curriculum with **collective** needs and assure that learning environments are close simulations of the job with applied performance criteria, Education/Training **IS** Experience.

#### Nested Educational Partnerships

Through a steadfast commitment to our Nested Educational Partnerships we seek to increase workforce pipeline quality. Within degree programs that align with our hiring projections, BASF:

- Joins/creates industry led educational advisory committees,
- Aligns education program learning with workplace knowledge and skill needs,
- Provides BASF site tours, student internships, and faculty externships, and
- Developed a "Nested Educational Partnership Playbook" that defines the roles and responsibilities of education and industry within this cooperation.

## Closing

According to the American Chemistry Council (ACC):

- More than 96 percent of all manufactured goods are touched by products of chemistry.
- As of December 2016, more than 275 new chemical production projects had been announced since 2010 with a total value of more than \$170 billion, with a full 49 percent already complete or under construction. "The United States remains the place for chemical companies to invest," (Kevin Swift, chief economist of ACC). Capital spending in the industry surged 21 percent in 2015, reaching nearly \$44 billion, and accounting for more than one-half of total construction spending by the manufacturing sector. By 2021, capital spending is expected to reach \$70 billion, contributing to four consecutive years of job growth in the industry (if the "Jobs Gap" doesn't prevent it).
- The business of chemistry is a \$797 billion enterprise and one of America's most significant manufacturing industries, accounting for more than 14 percent of all U.S. exports and 15 percent of the world's chemicals.
- Production grew in every major chemical producing region in the U.S. during 2016. Over the next five years, the most dynamic growth will occur in the Gulf Coast region, followed by the Ohio Valley and Southeast regions. In the long-term, the U.S. chemical industry will grow faster than the overall economy (if the "Jobs Gap" doesn't prevent it), and by 2020, U.S. chemical industry sales are expected to exceed \$1 trillion.

According to Forbes magazine, more than 350,000 manufacturing jobs are available right now. Beginning in 2016, 11,000 baby boomers are turning 70 years old every day. Combined with record investments in the U.S., over the next decade, manufacturing will have 3.5 million job vacancies and the skills gap is expected to result in two million of those jobs being unfilled. Additionally, research indicates that every job in manufacturing creates another 2.5 jobs in local goods and services. That is seven million jobs projected to go unfilled **if the "Jobs Gap" is ignored**.

We must act to prevent this:

- We must change our messaging to entice workers to seek jobs that are readily available, and that pay well,
- We must create education success metrics that indicate if we are filling the jobs most needed for America's sustainability, not just how many people have four-year degrees,
- We must encourage federal education dollars to be weighted toward careers with high availability projections,
- The Department of Labor must provide job projections directly to Department of Education within an aligned and specific strategy to guide education funding pursuit as well as spending decisions for program development incentives.

Moving forward, BASF plans to advance and scale the activities mentioned today across North America. We are prepared to openly share the strategy and execution plan for workforce development with industry and government partners. America needs the manufacturing industry to achieve the growth we clearly see coming. Congress must catalyze this growth by acting now.

Chairman SMITH. Ms. Pilarski.

**STATEMENT OF BARB PILARSKI, HEAD OF HUMAN RESOURCES, FCA U.S. LLC, AUBURN HILLS, MICHIGAN**

Ms. PILARSKI. Chairman Smith, Ranking Member Davis, and Members of the Subcommittee, thank you for the opportunity to contribute to the discussion on how to address industry-wide job gaps. As Head of Human Resources at Fiat Chrysler Automobiles, I am responsible for more than 60,000 employees in the U.S., many of whom live in Congressman Bishop's district.

Since June 2009, the company has created more than 28,000 new jobs and invested more than \$10 billion in the United States. We are justifiably proud of our growth in the U.S. over the last decade, but it also creates a challenge: finding the talented workers who will build our cars and trucks in the future.

Our assembly line workers operate under a production methodology that we call World Class Manufacturing, or WCM, which relies heavily on employee engagement and leadership on the shop floor. The results of WCM have exceeded our expectations in health and safety, quality, productivity, morale, and other key measures.

To continue to realize these kinds of benefits, we need our future assembly line workers to be idea generators, critical thinkers, problem solvers, and good communicators. We at FCA face two inter-related challenges in achieving this. First, our high school education system does not adequately expose students, especially those who may not be interested in a four year college degree to the manufacturing sector and the attractions of careers in this area.

Second, this same education system has been inconsistent in terms of providing all graduating students with the skills to keep pace with the evolution of the automotive industry. We need to build a stronger pipeline of workers at FCA, and we have already begun to do this. For example, in 2013, we initiated a partnership with Ivy Tech Community College in Kokomo, Indiana, to launch the Integrated Technology Education Program, also known as ITEP.

ITEP's goal is to reach high school students, including students from Congresswoman Walorski's district who are interested in manufacturing. The program exposes these students to manufacturing theory and concepts beginning sophomore year, followed by opportunities to shadow workers in a manufacturing facility during senior year. High school students who complete the ITEP program are eligible to receive free tuition for a two year technical associate degree from Ivy Tech.

This fall, we plan to launch a pilot co-op program at a Michigan Community College. The two year program combines classroom learning for four days a week with one day a week of work experience in one of our manufacturing facilities. Graduates of the program will be interviewed for supervisory jobs in our own plants.

Employers today have to think creatively about how to better prepare and support the good people we hire. For example, we recently redesigned our hiring and onboarding process for more than 2,800 new employees who will build Ram pickup trucks in Michigan to acclimate them to what it is like to work in an assembly plant before they even set foot on the shop floor.

We have also begun looking at ways to leverage our longstanding relationship with the United Way of Southeastern Michigan to provide other support and assistance to our workers to enable them to address challenges, such as the lack of reliable transportation and childcare, as well as to create employment opportunities in our plants to support the meaningful efforts that United Way is undertaking to get people back to work.

I would like to leave you with two suggestions on ways you can support employers like FCA. First, please continue to support and fund programs like the Department of Labor's Youth Career Connect Program, which supports educational partnerships like the ITEP program in Indiana. And, second, consider enhancing support for vocational education at high schools and community colleges. Manufacturers like FCA are reaching out to local schools to generate interest, but these efforts are piecemeal and specific to each company.

We need your help to take a comprehensive approach. This is so important, not just for us at FCA but for the suppliers and small businesses that we depend on for the components we utilize to build our cars and trucks. Thank you.

[The prepared statement of Mr. Ard follows:]



Testimony of Barbara Pilarski  
 Head of Human Resources, FCA US LLC  
 Auburn Hills, Michigan  
 House Ways and Means Subcommittee on Human Resources  
 “Jobs and Opportunities: Employer Perspectives on the Job Gaps”  
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Chairman Smith, Ranking Member Davis, and members of the Committee, on behalf of FCA US LLC, thank you for the opportunity to contribute to this discussion on how to address industry-wide job gaps to ensure American businesses can grow and thrive in the years ahead.

My name is Barbara Pilarski and I’m Head of Human Resources at FCA US for our North American operations. I have been with the company in various roles for over 30 years. After spending nearly 20 years in Business Development, I became Head of Human Resources in September 2017.

FCA US is a North American automaker based in Auburn Hills, Michigan. It designs, manufactures, and sells or distributes vehicles under the Chrysler, Dodge, Jeep®, Ram, FIAT® and Alfa Romeo brands, as well as the SRT performance designation. The Company also distributes Mopar® and Alfa Romeo parts and accessories. Fiat Chrysler Automobiles is the eighth-largest automaker in the world based on total annual vehicle sales, having sold more than 4.5 million vehicles globally, including two million vehicles in the U.S. during 2017.

FCA US has more than 60,000 employees in the U.S., with more than 43,000 employees working in U.S. manufacturing facilities. Since 2009, the Company has created more than 28,000 jobs and invested more than \$10 billion in the U.S. Last year alone, we hired over 4,500 people to work in our U.S. plants to support our expanding product lineup and the increasing demand for our vehicles. Our U.S. manufacturing facilities include six assembly, four engine, four transmission, and two components plants, as well as five stamping facilities.

FCA is a place where every employee, regardless of their position in the company, is empowered to drive change, where bold challenges are taken on and an entrepreneurial spirit is ever present. One of the key challenges to our continued growth is finding employees who are prepared to fill technical positions. This is a consistent concern across all types of technical positions and all levels of employment, from engineers to electricians to line workers, but for purposes of our discussion today, I would like to focus on the talented people who work on the assembly line building our vehicles and components.

In 2009, FCA began the process of implementing a production methodology that we call “World Class Manufacturing” (WCM) in an effort to achieve manufacturing excellence through a culture of constant improvement. WCM differs from many other production methodologies because it not only focuses on compliance with production-related standards, it also relies heavily on

employee engagement and leadership on the shop floor. For example, our assembly line workers are expected to help us improve the design of their own job stations in a way that reduces the risk of human error, improves safety and ergonomics, and increases overall production efficiency. This can only be achieved if these workers are able to quickly diagnose problems and then develop effective solutions. Some of these assembly line workers will eventually become team leaders, with the responsibilities of managing a group of employees and delivering the related training, guidance and oversight required to ensure the success of the entire team.

The results of WCM have exceeded our expectations in terms of year-over-year improvements in health and safety, quality, productivity, morale and other key measures, allowing us to pursue targets previously believed to be impossible, such as zero accidents, zero defects, and zero waste. While WCM provides us the tools we need to efficiently build the increasingly advanced, high-quality vehicles that consumers demand, in order to fully leverage WCM, we need assembly line workers who are idea generators, problem solvers, good communicators, and critical thinkers, some of whom will also aspire to become team leaders in our plants.

To realize our WCM goals, we face two interrelated challenges. First, our high school education system does not adequately expose students – especially those who may not be interested in a four-year college degree – to the manufacturing sector and the attractions of careers in this area. Second, this same education system has been inconsistent in terms of providing all graduating students with the skills to keep pace with the evolution of the automotive industry, and in particular, the skills required by our WCM methodology.

To address the workforce challenges that FCA is facing, we need to build a stronger pipeline of workers. In a number of ways, FCA has already begun to do this.

In 2013, we collaborated with Ivy Tech Community College in Kokomo, Indiana to launch the Integrated Technology Education Program (ITEP), a career pathway program designed to reach high school students in Howard, Tipton, and the surrounding counties in Central Indiana who are interested in manufacturing. ITEP's first class began in the fall of 2014 with 249 students from nine local high schools, including two in Congresswoman Walorski's district, along with support from three career centers. Since its inception, 45 other local businesses in the Kokomo area have joined ITEP, increasing manufacturing opportunities for students who participate in the program.

Students start the ITEP Program during their sophomore year, when they begin taking manufacturing classes taught at their local high schools. Beginning in the spring semester of their senior year, students spend time shadowing employees who have volunteered to mentor them in one of our five Central Indiana plants or at worksites designated by the other participating businesses.

ITEP students earn post-secondary credit and receive a Certified Production Certification while participating in the program. Students who complete the three-years of high school training

receive free tuition for a two-year Associate Degree from Ivy Tech in a technical field. Those interested in furthering their education also have the option to transfer the credits earned to a State college or university to complete a four-year degree.

Since its inception, 1,248 students have enrolled in the program. FCA will be hiring students from its first cohort to work for us over the summer as production supervisors and we are looking forward to hiring many more of these students in the future.

We are also working on a program for those who have already completed high school. This fall, we plan to launch a pilot co-op program at a community college in Michigan. The two-year program was designed by FCA US and combines classroom learning for four days a week with one day a week of hands-on experience in a manufacturing facility. Successful graduates of the program will be interviewed for supervisory jobs in our plants. We are expecting about 15-20 students to participate in our first class, but we hope to expand in the years ahead.

What is traditionally taught in high school classrooms does not always align with what we, as employers, need to run our businesses. That is why employers like us have to think creatively about how to better prepare the good people we hire for the jobs they will occupy. For example, we recently hired a few thousand new employees to build pickup trucks in Southeastern Michigan and we are putting them through an entirely new pre-production training process to acclimate them to what it is like to work in an assembly plant. We are also helping these new workers further develop the key skills, including critical thinking, required by our WCM methodology.

This new orientation process starts with an introduction to manufacturing in a controlled environment. Workers are placed in orientation groups and given practical experience at mock job stations with actual tools and parts to prepare for the physical rigors of manufacturing. We also teach these new workers shop floor standards and the safety rules associated with working in a plant. Those who successfully completed the orientation process reported that they were more confident about their roles and the responsibilities associated with their new positions, and that they felt a greater level of preparedness.

Unfortunately, about 11 percent of these workers did not complete the pre-production training, mostly because of tardiness or absenteeism. On the surface, it would be easy to assume the worst about why people are late or miss work. But with an issue that pronounced, we have to take a closer look at the facts and circumstances. By doing so, we have learned that certain entry-level manufacturing employees have unique needs that can make getting to work on a consistent basis difficult, like lack of reliable transportation and childcare. To better understand what our employees are going through and how we can help, we have begun discussions with United Way of Southeastern Michigan to find ways to ensure that our employees are given the assistance they require. The initial goal is to connect employees who are struggling, or have the potential to struggle, with United Way partner organizations that offer services in their areas of need.



United Way provides assistance to people from all walks and stages of life in communities across America, from youth and young adults who are just getting started to others who may have been displaced and are having trouble getting back on their feet. We believe this population could serve as an additional pipeline to fill manufacturing jobs at FCA US. As such, we are exploring ways to create employment opportunities in our plants to support the meaningful efforts the United Way is undertaking to get people back to work. These conversations are still in the early stages, but we are very excited about this collaboration.

Access to health care is another resource that is important for growing a strong pipeline of workers. We are proud to offer quality health plans to our employees and their dependents, but work schedules can sometimes make it difficult for employees to schedule doctor's appointments. Locations and appointment times may also be inconvenient and some of the communities where we operate are experiencing a shortage of physicians. To help alleviate that burden, we are launching our own health clinic this summer in one of our plant communities to provide direct primary care. Services at this clinic will be available to those enrolled in our health plans, with hours that will be more convenient for our workforce. For workers and their families enrolled in certain health plans, FCA will provide these services with no co-pay. We would be happy to share more details with you this summer.

I would like to leave you with some suggestions on ways you can support employers like FCA as we strengthen our manufacturing operations in the U.S.

The important work that we are doing through the ITEP program is partially funded by a grant from the Department of Labor's Youth Career Connect program. Programs like these are critical as we look for ways to establish a career pathway for younger workers interested in manufacturing. We ask Congress to continue to support and fund these types of programs.

Another way to help promote the growth of the manufacturing workforce is to enhance support for vocational education at high schools and community colleges. Manufacturers are reaching out to local schools to generate interest, but these efforts are piecemeal and specific to each company. We need your help to take a much more comprehensive approach, especially in places like Michigan, Indiana, Ohio and Illinois, where manufacturing is prevalent. Investments should be made in programs that highlight jobs in manufacturing by incorporating relevant content into the classroom as well as into afterschool programs. This is so important, not just for us, but for the suppliers and small businesses that we depend on for the components we utilize to build our cars and trucks.

We also need your support to help us stay innovative in keeping our workforce healthy. I mentioned our plans to open a clinic in one of our plant communities later this year. Our hope is to make primary care and disease management services available with no co-pay to all of our employees, but federal laws require us to charge enrollees in our high-deductible plans for these services. We need your help to be able to provide the same quality care without copays to everyone in the FCA family.

We are committed to producing vehicles in the United States. Reflecting this commitment, this past January, FCA announced a \$1 billion investment to modernize our Warren Truck Assembly Plant in Warren, Michigan to produce the next generation of Ram Heavy Duty trucks, which are currently produced in Mexico. This shift in production location will create 2,500 U.S. jobs.

We need these employees to come in job-ready. But for the reasons I've highlighted above, that is not likely to be the case for a segment of our new hires. To enable manufacturing to continue to grow in the U.S., these challenges must be overcome. FCA is committed to solve this issue by working with Members of the Committee and other officials in local, state, and federal government; with community organizations, like United Way; with local high schools and colleges; with our U.A.W. representatives; and with other manufacturers.

Thank you for your consideration of my testimony.

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Chairman SMITH. Thank you. I appreciate all of the testimony here. We will move into questions from myself and Members on both sides. I do want to point out that Nebraska is a great place to do business, but we need more workers. And having too few people for quite a while now to fill many positions, I just don't want this to turn into lost opportunity. And so, I am glad that we can have this discussion that is particularly timely.

Mr. Ard, I understand you have a new partnership with the Boys & Girls Clubs nationally, which will allow you to expand your program, right?

Mr. ARD. Correct.

Chairman SMITH. I also understand that you will now be having a presence with this program in Nebraska, although not in my district. There are only three House Members. We get along well and are proud of each other's advances in our respective districts in Nebraska.

But can you perhaps talk about why you believe it is important to expand beyond the major markets of say New York City, Chicago, and L.A. to places like Omaha?

Mr. ARD. Yeah. Thank you very much. As you mentioned, we will be going into the Nebraska market through an extended partnership with the Boys & Girls Clubs of America. We are going to go into 22 new cities that we are not currently operating in, and we are very excited about that, by the way. Let me give you a couple of details that we believe—

Chairman SMITH. Because it's Nebraska, right?

Mr. ARD. Nebraska. It is. So, let me give you a couple of details that we think are key ingredients to these partnerships. So, we look for a local youth-serving nonprofit, and particularly one that runs training programs. As I mentioned about the Big Sibs and some of the back-office support, if you will, for our trainees, it is super important.

We look for employee volunteers from our Old Navy, from our Gap, as well as from our Banana Republic stores, who are going to work with the local nonprofits again to support the training, as well as to make the connections with the youth, and who also have an interest in their community. We look for store managers who hire for potential and not credential. So, they are probing on openness. They are probing on feedback, work ethic. And, you know, we see that the interview approach is a key differentiator, and so it is a core ingredient to our ability to be successful as we go into a new market.

Support for youth post-hire is critically important. It is one thing to get the job; it is another thing to keep the job. In addition to store managers who offer the guidance and the feedback through the This Way Ahead program, we have established the Big Sib. And, again, this is someone who is there for you, who is answering all your questions, things you might not be interested in asking your manager directly, and it just gives that supplemental support that they may not be getting anywhere else in their life.

All of these supports, and in addition to exposure to Gap Inc.'s culture as well as our values, help to make you feel welcome and at home, and we know that they feel that they are believed in.

Chairman SMITH. Very good. Thank you.

Mr. Staub, you have been sounding the alarm about the jobs gap for quite some time, well before it was on a lot of the other folks' radar. Can you tell me what motivates you to keep beating this drum about the workforce and taking what others perceive as risks in who you hire and devoting your personal time to engaging with junior high and high school students?

Mr. STAUB. Thank you. Simply, it is the right thing to do. I am third generation in the manufacturing industry and fifth generation in Dayton, Ohio, and I have seen over the years how, with the opioid epidemic and other things, how we have had a lot of people that have somewhat been lost, I could say. And the industry has continually grown, and it has worked out well—it is just something I am passionate about to try and get people into the industry.

Interacting with high school and middle-aged kids, I see that the schools aren't—like was said previously—aren't really conveying the message that you can be successful without a 4-year degree. I went to college for a year and a half and took a year off and never quite made it back. And there is a lot of us out there that weren't college material but have been very successful by following a path in the manufacturing and trades industry.

Chairman SMITH. Very good. Thank you. I think these items that you have raised and others on the panel have raised that there is more than one path to success than a 4-year degree. And I think we have turned the corner a bit on this, and certainly I am a big fan of our community college system that can work with the private sector very effectively and efficiently as we do address this problem. And, hopefully, we can see it as an opportunity to get folks back on to the economic playing field and off the sidelines where it currently is just posing some challenges and lost opportunities.

So, with that, I will recognize Mr. Davis for 5 minutes for his questions.

Mr. DAVIS. Thank you, Mr. Chairman.

I thank all the witnesses for your testimony. Dr. Lustig, evidence shows that substance abuse disorders don't discriminate, that wealthy people are just as likely to use drugs as poor people. But poor people who are poor, especially those in poor communities, do have a harder time getting support and treatment than those with more resources, especially in States that did not expand Medicaid under the Affordable Care Act; they may not have access to treatment. And even if they can access treatment, they may struggle to pay for childcare or rent while they are in treatment, and they may be less likely to have jobs waiting for them when they get out.

What are some of the additional supports you provide to your clients to make sure that they can get treatment and be in a position to get a job?

Mr. LUSTIG. So, first and foremost, Haymarket Center is a 400-bed residential complex on the west side of Chicago, and our goal is to offer a very comprehensive program with immediate access to care. So, once we stabilize individuals in treatment, one of the key components in keeping individuals sustained in recovery is job placement. And it is not just getting someone stabilized on a medical disorder that is also as critical, but so many of the patients

that we see, which is about 12,000 a year, actually have so many additional barriers.

And so, one of the three things that we do at Haymarket Center that moves people into recovery quicker is that we not only address the addiction, the mental illness, and any kind of medical disorders that a patient presents with, but we have a job readiness program, and that really starts to, as a person finishes treatment, that is a time when we are able to work with individuals, begin the soft skills training, and really begin to rebuild a person. That still is not quite enough when you deal with individuals with long-term addiction.

What is key is that we have what are called job coaches and recovery coaches. That is a program that follows individuals for 1-year post-treatment, and that is what we have learned to be really key components for individuals who are leaving treatment, is that we follow them for a year. And employers actually begin to build a level of credibility when they know that somebody else is involved with that individual. And so, our program—our job training program focuses on job coaching and mentoring and addressing those skills as a person moves through what is called “early recovery.”

Mr. DAVIS. Does your agency get any support from TANF?

Mr. LUSTIG. Yes, we do. We are an agency that has extensive support from TANF. We couldn't do what we do if it wasn't the support from TANF, both as it comes to addressing our entire issue. About 6 years ago, we took on a family-based model, and that model was designed not just to treat the individual patient but the entire family because addiction impacts the entire family. And so, we have had mothers and fathers who are not just impaired when it comes to addictions, but a lot of the kids are also failing in schools and need support. And so, a lot of our programs go out into the community and work with the entire family in addressing issues that the family needs to address to heal them.

Mr. DAVIS. Mr. Johnson, does your program get any TANF support?

Mr. JOHNSON. It is not something I have information for today, but I can absolutely get back to you on that.

Mr. DAVIS. Ms. Pilarski, does your organization get TANF support?

Ms. PILARSKI. Can you please repeat the question?

Mr. DAVIS. Yes. Do you have any support from TANF for the work that you do?

Ms. PILARSKI. I would also have to get back to you on that. We certainly have programs for our employees who are suffering from substance abuse, individualized programs to help identify those employees and then respond to those issues.

Mr. DAVIS. Mr. Staub, do you get any?

Mr. STAUB. I do not believe so.

Mr. DAVIS. Ms. Shapiro?

Ms. SHAPIRO. We do not.

Mr. DAVIS. Mr. Ard?

Mr. ARD. We do not. No specific plans at this time.

Mr. DAVIS. Well, I thank each one of you very much. And my point is that there is room for TANF to provide support that is cur-

rently not providing to some of the agencies that are doing the work.

I yield back.

Chairman SMITH. Thank you. I now recognize Ms. Walorski for 5 minutes.

Mrs. WALORSKI. Thank you, Mr. Chairman.

Thanks to all of you for being here to talk about the jobs gap.

Mr. Ard, just a quick question. I am curious, when your folks are interviewing these applicants and you talk about what they are looking for—they are kind of perusing with questions on openness to feedback and work ethic, what are some of those questions? How do you actually get in there and assess that? Just give me an example of like two questions.

Mr. ARD. Absolutely. I mean, challenges that someone has overcome, that is certainly a very important way by which you can understand what someone has overcome, as well as what their determination is. Grit is really important as we think about that path to determination. And what they have learned from their job training, that curiosity and that willingness and that openness to have your mind changed. Those are two areas and two fundamental sort of ways we go about asking questions to get at that.

Mrs. WALORSKI. Interesting. I appreciate it.

And, Ms. Pilarski, thanks for all your work you are doing in my district to drum up interest in manufacturing. It is a challenge that is pretty well documented across my district in northern Indiana. Lots of manufacturing, and lots of manufacturing jobs, and no bodies to put in them. I am interested to learn more about this ITEP program that you started with Ivy Tech.

You mentioned 45 others companies have joined ITEP. How do you work with those other companies, and are the other companies competitors or in different industries? And then are the students, when they are shadowing somebody, are they just shadowing you, you know, some of these other competitors? How does that whole process work?

Ms. PILARSKI. Thanks for the question. We are really proud of the program. Ivy Tech—we sort of divide up the responsibility for this important initiative among the folks that have the competencies. So, there is not a lot of interaction that we have with the other 45 companies, we interact directly with Ivy Tech. Ivy Tech is the organization that determines the curriculum that the students are taught in sophomore year, which eventually leads to a certified production certificate for them.

What we do is we expose these students to manufacturing. So, beginning in their senior year, we invite them into our plants, and we have a very structured 12-week program. So, they come to us a few days each week, they have two rotations through two of our plants, and they have three assignments in total. And they are given coaches because the most important thing we are going to teach these kids in 12 weeks isn't necessarily technical skills; we are going to teach them soft skills.

So, we want to make sure they know they need to show up at work every day, that they need to be there on time, that they need to be part of an important team. They need to ask questions. All

of those kinds of things that may be very natural to a lot of kids aren't always natural to all kids. So that is our role.

So, we expose these kids to manufacturing. They make it through their associate's degree. Right now, we have some that have come back to us now doing summer internships, who we think have great promise, and our hope is that we start offering them full-time jobs when they complete their associate's degree.

Mrs. WALORSKI. So, given the fact that these are young people coming right out of high school and they really don't have these skills that you are trying to teach them, soft skills, show up, it is important. How do you do that with a young person that comes in the door? Is this competitive where they are competing with each other? Are you incentivizing them when they do something correct that they have got what you are trying to tell them? What do you do?

Ms. PILARSKI. We assign mentors. We assign one-on-one mentors. Every one of these kids has a mentor that follows them through these assignments. And those mentors are meeting with the kids. They are giving them guidance. They are talking to the supervisors that have exposure to the kids. So, we are giving them sort of real-time feedback and help molding them as they make it through this 12-week process. And that is really the way you do it. You team up—you really find support and assistance in that way. We find that to be the most effective.

Mrs. WALORSKI. I appreciate it.

I yield back, Mr. Chairman. Thank you.

Chairman SMITH. Thank you.

Next, recognizing for 5 minutes, Ms. Chu.

Ms. CHU. Ms. Pilarski and Mr. Johnson, I would like to direct my first questions to both of you. Many of the programs you highlighted today are offered to youth in high school or individuals in the early stages of their career. However, there are other populations that are willing to work and able to work but would have difficulty following those pathways.

According to the Migration Policy Institute, 25 million individuals in the U.S. are considered limited English proficient, or LEP. In my region of the Los Angeles metro area, 26 percent of the total working age population is LEP. In addition, 47 percent of adults who speak Asian or Pacific Island languages are LEP, which is the highest percentage of any linguistic group, including Spanish-speaking individuals.

These statistics are very relevant to today's discussion because LEP individuals are more likely to live in poverty than English proficient individuals. In 2015, about 23 percent of LEP individuals lived in households with an annual income below the official federal poverty line, which is nearly twice as high as the share of English proficient persons.

Ms. CHU. Now, there are companies that are helping LEPs gain English skills to help fill jobs. The Boston Globe reported in January of 2017 that companies who are facing worker shortages have started offering English classes free of charge at work sites for its employees. Employees are paid the normal wage while they are in class. Companies are finding that investing in English skills and other kinds of training helps them retain employees, helps them

promote from within the company, and has helped employers identify workers whose potential was previously hidden behind a language barrier.

In addition, errors are reduced, and employees can provide better customer service. Employers are offering this benefit in a range of industries from hospitals to manufacturing to food service companies. So, this is one way that employees can close the job gap.

I would like to know; do you have people who work for you in your companies for whom English is not the first language? And do you offer services such as this?

Mr. JOHNSON. Thank you for the question.

Specifically, within the organization, what I would better refer that to is the people that are on the boards that we work with. So, the first thing that we must do is to be sure that we have a strong industry partnership along with education to identify what are the critical crafts for the area. If we have done that, we have half of the battle. But a part of that, and what is missing in most of those boards, is connecting with the neighborhood centers around the area that have the direct connection to people that are underrepresented and to people that are in impoverished areas that need these additional services. Including those organizations onto the board allows us to find out what are these additional barriers that we need to address within the education portion because just enticing them to come to this path is not the end of the equation. The other part of that is the quality part of it, and what are the skills that they need? And if there are some underlying foundational skills that are necessary like what you are talking about, it helps us to know in advance what those are, to put into the curriculum.

Ms. CHU. So, Mr. Johnson, I am talking about the English language skills. So, are those being addressed?

Mr. JOHNSON. Yes. If that is identified as a critical skill, as a skill that is absent in the community that we are trying to employ people, then it is put into the curriculum as well.

Ms. CHU. Ms. Pilarski.

Ms. PILARSKI. In southeastern Michigan, we also struggle with a population of folks that have non-English speaking skills. And one of the ways that we address it is through our partnership with United Way of Southeastern Michigan. So, we have been together partnering with United Way for 65 years. We have a very long-standing relationship. And they have some unique and specific programs where they focus on folks who have trouble with English. Our employees this year contributed over \$5 million to support programs like these with United Way of Southeastern Michigan.

So, I can certainly relate to the challenges that you have. We find it ourselves in our region, and we think the right approach is to partner with professionals like United Way to help us move through that issue because those folks, you are exactly right, would be very good folks for us to consider for positions in our plants.

Ms. CHU. I applaud you for that partnership. It certainly can make sure that we utilize these people to the greatest degree possible by addressing their English language skills and certainly can provide a more robust workforce. Thank you.

Chairman SMITH. Thank you. Next up, we have Mr. Bishop who is recognized for 5 minutes.



Mr. BISHOP. Thank you, Mr. Chair.

Thank you to all the panelists for being here today. Thank you for taking the time out of your busy days to participate in this and helping to craft public policy and really lead discussion on this issue that is so vitally important to the future of this country.

Each and every one of us has constituents that we represent. Personally, I have been all over my district talking to companies big and small about issues that are of concern to them.

This is the primary issue that I hear from every single business, and so we really have got to get creative about this, and we really have got to work together to figure out how to change the direction of what we are doing now and really, reinventing the wheel.

In Michigan, as Ms. Pilarski knows, we are the motor city, and we had some problems about 10 years ago. We had a really, really bad recession. Manufacturing jobs left our State, and they did in great numbers. We are just now rebuilding. Ten years later, I think you can say that, as many people do, that Michigan is the comeback State and Detroit is a comeback city. One of our biggest problems, and some people say it is probably a good problem to have, is our economy is doing so well that we need workers, and we have to find a way to fill them.

So, Ms. Pilarski, I know that Fiat Chrysler has done such a great job in bringing this intuitive new process, it is brand-new on how you look for employees and fill spots. You are the H.R. director of a rather large—if anybody has an issue or is struggling right now or has challenges, it has got to be someone like you who sees it from every angle.

There are so many things to talk about, but can you tell me a little bit about the United Way? I know you just started a discussion with Ms. Chu, but I would like to hear more.

Ms. PILARSKI. Yes. We actually feel like part of the resolution to this problem is partnering with community organizations like the United Way. As I said, we have been together with them for 65 years, and we understand very well the programs that they have, what they have done, where they have been successful. And so, for example, they have a program they call College and Career Pathways. And what they do, these are for high school students, and they prepare kids for life after high school whether it is a two or four year degree or it is something else.

So, for us, that is very natural for us to connect to a program like that because we have the jobs for those folks, those high schoolers who aren't going to go right and start their four year college degree. So, for us, understanding their programs and then being able to figure out where we connect is really, really important.

The other thing, one of the things in our plants that can be a problem for us is absenteeism. And if you really drill down on that issue, you find that our employees struggle with some things like transportation, reliable transportation, childcare, other things, and United Way has wraparound services to help employees do that.

I said that we have been partnering with United Way for 65 years. For 64 years it was a one-way thing where we were raising money and providing it to United Way, and this is the first year

in 65 years that we are asking for support back because of the situation that we are dealing with regarding the jobs gap.

Mr. BISHOP. It is admirable. On behalf of my constituent base in southeast Michigan and the State of Michigan, I am so grateful to Fiat Chrysler for your leadership in this area.

You also mentioned in your testimony, and also, I indicated in the introduction, that you are thinking about taking away the requirement for college education for your supervisors. We have many students in this country, many young people who have significant debt in that 18- to 24-year-old gap that are most likely not to have a job, and so we are facing a fundamental crisis here.

Tell us a little bit about your decision to take away that degree requirement for supervisors.

Ms. PILARSKI. Yes, and we are talking specifically about production supervisors, so these are folks in our plants that generally have responsibility for a team of about 40 people that would lead maybe five or six different work activities. In the past, we have required a four year degree for those folks, and we have too many positions that are open.

What we are finding is that when we bring a new hire on to the assembly line who doesn't need a college degree, we bring them in as a team member, and for those who have the interest, they can aspire to be team leaders which they are then managing about six folks. We are finding that these folks are a really good pipeline into these production supervisor positions, but they don't have the college degree. So, we just connected the dots on that and said, we need to rethink what our minimum requirements are because we really have the capability in these employees, and we need to leverage that and that is what really drove the decision.

Mr. BISHOP. Thank you very much. I yield back.

Chairman SMITH. In the interest of time, we want to move things along given the vote schedule.

Next, I will recognize Ms. Sewell for 5 minutes.

Ms. SEWELL. Thank you, Chairman Smith and Ranking Member Davis. I want to thank our witnesses for being here today. My constituents in Alabama know that my top legislative priority is jobs and workforce development. Every year, during the August district work period, I host a job fair, an annual job fair, that moves around between my urban parts and my rural parts of my district given the fact that there are different needs in different parts of the district. But there are very real barriers that obstruct individuals from entering or staying in the workforce.

After every job fair, I hear from my employers that there are many enthusiastic applicants but that the job openings go unfilled because many of the candidates don't have the proper skills or training to qualify to fill those jobs.

That is why I think it is really important that the work that you all are doing in terms of workforce development and apprenticeship programs and internship programs are critically important to our ability to make sure that we not only close the jobs gap but the opportunity gap that exists in this country.

Policymakers, Republicans and Democrats, support apprenticeship programs and internships because employers can fill labor gaps, and workers can earn while they learn. But apprenticeships

are scarce in today's economy. Last year, fewer than 50,000 Americans graduated from a registered apprenticeship program. Moreover, I have learned that often they don't reach women, minorities, and rural youth as effectively as they do other kinds of applicants.

After speaking to my constituents and employers, I found that there are two reasons for this. First, low-income families need stability to be effective participants in workforce development programs. If a family can't afford childcare or they don't have access to transportation, housing, or healthcare, it becomes almost impossible for an individual to focus on succeeding in a workforce development program.

In my district, where the average median household income for a family of four is less than \$35,000, working families don't earn enough to make ends meet without assistance. So, if Congress and this Administration is serious about addressing the skills gap, we must strengthen funding for wraparound services so that those who have fallen on hard times have the ability and the opportunity to pull themselves out of poverty.

Secondly, I believe the reason why we see fewer youth—rural youth, minorities, and women in some of these programs is because workforce development programs do not serve some of our most disparate populations programs like I think programs like TANF, the Temporary Assistance for Needy Families, is not properly designed to provide workforce training and education to its recipients. Since its inception, TANF has been sold as a program that helps transition impoverished Americans, but, unfortunately, very few TANF dollars go to education and training, making it very difficult for TANF recipients to find good, long-term employment.

This Committee must focus on making sure that workforce development becomes the central part of TANF's mission. And that is what we are doing here today is learning more about what works as far as workforce development programs and what we can learn from them.

So, I guess my question: I will start with you, Ms. Pilarski, I in Alabama, we consider ourselves the Detroit of the South because we have a lot of automobile manufacturers in our district. Likewise, in my district, I have Mercedes-Benz and Hyundai, so I am quite interested in the program that you have outlined.

Can you talk to us about best practices and what workforce development and apprenticeship best practices that you have learned that we can maybe glean to government assistance programs like TANF?

Ms. PILARSKI. You know, I will agree with you that these apprenticeship programs and co-ops and all that kind of stuff, these are very small numbers. They are very, very, very small numbers.

Ms. SEWELL. And often they are more than—your training program is a 2-year program. TANF only is 12 months. We have to really start thinking about how we are designing these programs in order to make sure that we are addressing the real skills gap that exists.

Ms. PILARSKI. Right. I agree. Like I mentioned before, I think when we talk about apprenticeship or development of folks coming into the organization, we really leverage these mentoring relation-

ships. We really leverage these cohort groups of folks with similar experiences and similar skills coming in.

Ms. SEWELL. They can learn from each other.

Ms. PILARSKI. Yes. It is really important, and especially for young kids, coming from schools, they are used to those——

Ms. SEWELL. I am running out of time. I wanted to ask Dr. Lustig, wraparound services like having access to childcare and access to transportation, how critical is that in these programs?

Mr. LUSTIG. Those are the most significant barriers. One of the biggest barriers for women accessing treatment is the need for childcare. Most agencies and services won't allow a woman to become stabilized without childcare, and that is a tremendous barrier.

So, one of the things we do at Haymarket Center is as mom is going through our job training program, we are offering an onsite daycare center.

Chairman SMITH. I am sorry to interrupt, but we are kind of pressed for time.

Next recognized for 5 minutes is Mr. Reichert.

Mr. REICHERT. Ms. Shapiro, how long have you been working in this field in your community?

Ms. SHAPIRO. Twenty years.

Mr. REICHERT. Twenty years. Dr. Lustig, how long have you been doing your outreach work?

Mr. LUSTIG. Twenty-five years.

Mr. REICHERT. So, in your 45 years of experience, what has changed since you started your work and we find ourselves in the situation that we find ourselves in today?

Ms. Shapiro, first.

Ms. SHAPIRO. Broad question. I think, in some ways, the work has gotten harder. In New York City, even just 7 or 8 years ago, the number of out-of-school and out-of-work adults was about 187,000. That is just in New York City.

Mr. REICHERT. What was it 20 years ago, do you remember? Roughly.

Ms. SHAPIRO. Maybe a little bit less than that but still high. And so——

Mr. REICHERT. So, no progress.

Ms. SHAPIRO. Not a lot. And now it actually has dropped a bit. So now it is down to 136,000. It is still a huge number, but it has dropped a bit. But the young people who are sort of left behind, who are sort of left disconnected are the ones who need the most support. And so young people who are aging out of foster care, young people who have involved with the justice system, young people who are struggling with mental illness, those are a lot of the barriers that we are trying to address now.

Mr. REICHERT. I get that. Doctor, what do you see, after your 25 years of hard work?

Mr. LUSTIG. We don't see a lot that has changed. But what we have seen is that the programs that the Federal Government has put out, we have learned a lot, and we have found that some of these work development programs, these job training programs, really do work, but they are never brought to scale.

Mr. REICHERT. One of the comments you made was this is generational. That is what I am trying to get at. I know—I agree: the programs, the treatment, the medical, the psychological, the physical medical treatments, and help that we can give people, job training, soft skills. I have got a question mark around that, learning disabilities. I am dyslexic. I barely graduated from high school. I have 2 years of college and look where I ended up: God has punished me. No. I am proud to serve.

But the point is that what is happening—for me, it is what is happening in the family. I was a cop for 33 years. I ran away from home when I was a senior in high school. I lived in an old car. I went to school every day. I am trying to figure out why. I think it was football and girls was the reason I was there.

We used to have home economics class, wood shop, metal shop, and machine shop, and we don't have those in our schools today. We need to go back to the basics, I think, and what can we do, especially in the foster care world too. I was a foster grandparent and an adoptive grandparent, et cetera. There are so many things that are happening within the family that create or not happening within the family that create the situation that we are in now that is happening in the school or not happening in our schools that are creating the sadness that we see that you have seen for 45 years total.

What can we do to prevent? Because I am about prevention. Instead of—we are playing catchup. And your numbers are essentially the same. What can we do for prevention?

Mr. LUSTIG. First and foremost, when you look at your prevention programs, most prevention programs in many States have either been cut or eliminated. So that is the first piece to understand.

Mr. REICHERT. At the local, city, county, State level?

Mr. LUSTIG. Yes. But what is the key with prevention is that we have to get far enough upstream to really have prevention work. That is what we are not seeing today. So, when you take a look at, take addiction that is impacting so many families as it relates to jobs—

Mr. REICHERT. I have seen that.

Mr. LUSTIG. There are so many key pieces to this. The key piece to understanding addiction is, even though we have dumped billions of dollars into the opioid epidemic, the issue as it relates to stigma of people seeking treatment is still alive and well today. So, you have to get your prevention programs.

Mr. REICHERT. What about the soft skills though? That is stuff that my parents taught me at home, the teachers taught me at home: to show up for work or to show up on time, 8 hours work for 8 hours pay.

Ms. Shapiro, real quick.

Ms. SHAPIRO. I think the focus really has to be, and for us, it is sort of on positive youth development, and that is prevention for us. It is getting to young people early, providing them opportunities, connecting them to positive relationships with caring adults, providing that wraparound support, believing in them, and helping them chart a course for their future, which as we have talked about in this hearing may or may not involve college but can cer-

tainly involve positive paths either through education or through careers.

Mr. REICHERT. Thank you.

I yield back.

Chairman SMITH. Next is Mr. LaHood for 5 minutes or less.

Mr. LAHOOD. Thank you, Mr. Chairman.

I appreciate your doing this series before our Subcommittee on the jobs gap and employers' need for qualified workers. It is so important to our economy and where we are at today.

I want to thank all the witnesses for being here today for spending some time with us and sharing your perspective.

Mr. Johnson, I had a couple of questions for you.

In your testimony, you talk about a strategy for workforce development and collaborative synergy. I have heard mixed reviews about the workforce system and one-stop centers. In my State, they call them Illinois Worknet Centers. Given that you operate facilities I believe in 29 States, what has your experience been in working with the workforce system? That is number one.

Secondly, my understanding is that the workforce system, or WIOA, is supposed to be oriented toward connecting people with in-demand jobs and working with employers in some of the same ways we have heard in your testimony.

Is that currently happening?

Mr. JOHNSON. Yes, that is currently happening. But the key, I believe, is to connect those workforce centers with the workforce boards that industries are leading together as a group. Getting us all together to this workforce development equation that I mentioned is the only way for everyone to understand it, to be able to follow it. For example, let's say that one of my BASF sites or the site leader says that they decide they need three electrical technicians over the next 5 and 10 years. Well, to get three, we have to credential three. But to credential three, you have to enroll six, because not everyone makes it through the program. To enroll six, we have to talk to 25 because we don't convince everyone to take the path.

That system is what is happening today with individuals worried about that end-part of the pipeline.

If we do that, the problem is we are never going to supply what we are trying to get because a lot of those people who are graduating with those credentials may get hired by someone else.

The better bet is for us to work with our regional partners, our industry partners in the area, and decide how many electrical technicians do we need as a group for this region so we know how many to enroll, so we know how many to speak to. If we get that math correct, we create a pipeline that fulfills us all instead of us only worrying about our individual needs.

Mr. LAHOOD. When you describe that deficiency, is there a public policy answer to that? Is there something government should or shouldn't be doing? Or is that something that is solved in the private sector?

Mr. JOHNSON. Well, it is a bigger answer than I have time for today, but the answer is absolutely yes.

One of the primary things that I believe that public policy can address is educational funding messaging. I talk about the message

a lot during my testimony, parents, teachers, everyone, but that would include our policy does not communicate to kids, what jobs are available. If I as a young student go to apply and get a Pell grant, whenever I get that Pell grant, it doesn't tell me that I can use it for just these particular jobs, but that is what it should do. Right now, if you get qualified for a Pell grant, you can use it for a master's degree in basket weaving if you want to. But you are probably not going to get a job in that.

If we change policy to where educational funding is based upon job availability projections, we are sending a message each time to each student whenever they fill out their federal application for student financial aid, that, yes, I received this money, but I might not want to go in this particular direction because they don't say there is going to be any jobs available.

Mr. LAHOOD. Lastly, as the world's largest chemical producer in the world, can you talk a little about BASF, how you balance the need for labor when unemployment is so low with safety concerns in your facilities?

Mr. JOHNSON. I would hate to say the word "balance against safety" at any time. Safety is number one at all times. But we do address the need for labor by the urgency at which we take action and join with our industry partners.

The urgency of what is happening now and what we project to see happening because 11,000 baby boomers turn 70 every single 24 hours beginning last year is something that we have to take action on now and, again, as I mentioned earlier, not put the snooze button on this jobs gap issue. So, we are taking the urgency extremely seriously at this moment to prepare for something we don't think is quite affecting us yet. We believe that a lot of baby boomers have decided to stay in the workforce for a number of years longer than they would have because of the last 5 to 10 years of market downturns when they thought they were going to retire, didn't because their 401(k)s just weren't where they thought it would be. By the time it came back, they realized: I don't have to retire. But we are learning that, by the time they turn 70, they are rethinking that decision.

Mr. LAHOOD. Thank you.

Chairman SMITH. Thank you.

Mr. Schweikert.

Mr. SCHWEIKERT. Thank you, Mr. Chairman.

This is an area I have a huge fascination so forgive me if we bounce all over the place data-wise. I actually have the CBO report in front of me that is talking about our economic growth and those things. It turns out they consider the single biggest barrier, the capping that we are—the ceiling we are hitting up against is our labor force participation numbers. And within that, it was shocking. You just talked about seniors. When you actually look at some of the labor force participation numbers, how many of our younger people aren't actually entering the labor force.

I struggle with some of this because just what I think 10 days ago sitting right where you are sitting, I had a gentleman from Arizona, a three-time convicted felon, took on some electrical training classes from an electrical contractor in prison, solely nongovern-

ment, because they were so desperate for workers, and they are having this amazing retention rate.

Remember this is a young man who was an addict. But bless him. As he said, one of the quotes, and it is burned in my head, is: I am working so many hours and I am so busy, I haven't had a chance to relapse.

In several months he is up to \$22 an hour.

And having a mother who was a substance abuse counselor where we never knew who was coming to Thanksgiving dinner, it turns out being busy sometimes is an amazing antidote to that and showing up at your meetings.

If I came to you right now and said: This is the opportunity we were dreaming of a few years ago, there are jobs. A few years ago, our complaint was there weren't jobs. People are moving to very bad behavior because they have no place to go. We can't use that excuse today. We have lots of places for them to go.

What are we working? Is it Ms. Shapiro? Did you say you were seeing actually in some of your population that you are down to what, 130,000?

Ms. SHAPIRO. In New York City.

Mr. SCHWEIKERT. My curiosity is it was a measurable number.

Ms. SHAPIRO. In New York City, there are 136,000 out-of-school out-of-work young people.

Mr. SCHWEIKERT. What was it at its peak a few years ago?

Ms. SHAPIRO. It was 187,000.

Mr. SCHWEIKERT. So what positive happened in that population? How do we keep doing more of that?

Ms. SHAPIRO. I think there has been progress with both additional public resources. And in New York City, there are also a lot of private resources that are dedicated to workforce development. So, the programs that have been set up, and there is a good infrastructure of job training programs in the city have worked—

Mr. SCHWEIKERT. Could you share with me—I am sorry; I know I am interrupting it is but it is the life of living on a clock—are you seeing the number of businesses just like our example last week with the young man who is changing his life around, it was a business that needed a certain electrical talent. They trained him to that talent and guaranteed him a job upon his release date whereas—and I would like to actually submit it to the record. I have the Labor Department inspector general's report on the Job Corps, and it is heartbreaking how badly the auditor general said it is failing the very populations it is supposed to be serving.

Chairman SMITH. Without objection.



Working Paper Series  
Congressional Budget Office  
Washington, D.C.

## **CBO's Projection of Labor Force Participation Rates**

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To enhance the transparency of the work of the Congressional Budget Office and to encourage external review of that work, CBO's working paper series includes papers that provide technical descriptions of official CBO analyses as well as papers that represent original, independent research by CBO analysts. Papers in this series are available at <http://go.usa.gov/ULE>.

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## Abstract

As part of its responsibility for producing baseline projections of the economy and the federal budget, the Congressional Budget Office regularly produces estimates and projections of labor force participation rates. Those projections serve as a key input to CBO's estimate of potential output and the agency's macroeconomic forecasts and budget projections. This paper describes the methodology used to produce CBO's projections of labor force participation rates.

The paper further examines the factors behind the recent trend decline in the overall and prime-age labor force participation rates and whether CBO expects those declines to persist over the next decade. Persistent weakness in the labor market following the 2007–2009 recession reduced the overall labor force participation rate by as much as 1.2 percentage points and the prime-age rate by as much as 1.3 percentage points. A strengthening labor market has pulled some workers back into the labor force in recent years, and further cyclical increases are estimated to occur in both the overall and prime-age rates over the next few years.

The estimates show, though, that the vast majority of the recent decline in the overall rate stems from the aging of the baby-boom generation into retirement, and CBO expects aging to cause further declines in that rate over the next 10 years. The recent decline in the prime-age rate is entirely unrelated to aging, and CBO expects that downward trend to stop over the next decade, as increases in educational attainment outstrip further declines in the participation rates of less educated, prime-age individuals.

*Keywords:* Labor force, labor force composition, labor force demographics, labor force participation, labor market forecasting, macroeconomic forecasting

*JEL Classification:* E17, E24, E27, J21, J22

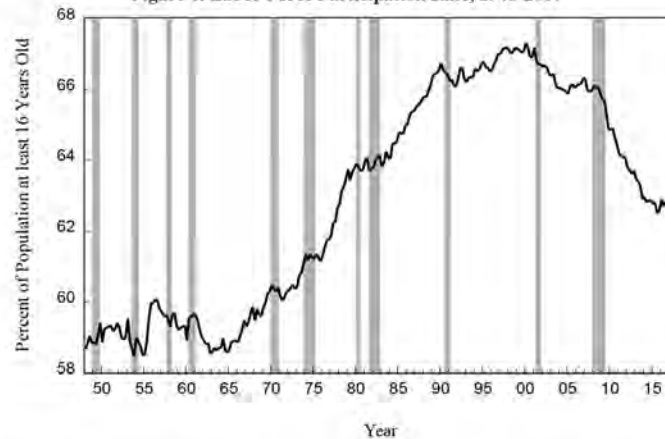
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## Introduction

After increasing for nearly four decades, the rate of labor force participation for individuals at least 16 years old began to fall in the first decade of the 2000s, from a peak of 67.1 percent in 2000 to 66.0 percent at the start of the 2007–2009 recession. Between the start of the recession and 2014, however, the rate fell even further, by a little more than 3 percentage points, to 62.9 percent. Since 2014, the labor force participation rate has stabilized, remaining at 62.8 percent in 2017 but still well below its pre-recession value (see Figure 1).<sup>1</sup>

Figure 1. Labor Force Participation Rate, 1948-2017



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

Forecasts of the rate of participation in the labor force are an important ingredient of the Congressional Budget Office's economic projections. Such estimates, along with the size of the population, determine the size of the labor force. A smaller labor force (or a lower labor force participation rate) is associated with lower gross domestic product (GDP) and lower tax revenues. It is also associated with larger federal outlays, because people who are not in the labor force are more likely to enroll in federal benefit programs.

Forecasts of the labor force participation rate depend importantly on the projection of the potential labor force participation rate, which is an estimate of the rate that would occur if the economy were at its maximum sustainable level of output. Furthermore, projections of the potential labor force participation

<sup>1</sup> For a review of the trends that contributed to changes in labor force participation rates by age and sex and the implications for the aggregate labor force participation rate, see Julin and Potter (2006).

rate serve as a key input to CBO's estimate of potential output and its macroeconomic forecasts and budget projections.<sup>2</sup>

This paper examines factors that drive changes in the labor force participation rate and explores whether the recent decline may continue. Specifically, CBO constructs a birth-year cohort model to estimate labor force participation rates by age-sex-education-race/ethnicity subgroups. CBO augments the model's age-sex-education-race/ethnicity and birth-year cohort fixed effects with a measure of the business cycle and several observable structural determinants of labor force participation to measure how much variation in those rates is cyclical and how much is structural. CBO then aggregates the estimates of the group rates to construct an estimate of the aggregate labor force participation rate. The predicted structural portion yields an estimate of the potential labor force participation rate.

The results show that, despite no sustained increase in the observed labor force participation rate in recent years, there has been a significant cyclical increase in that rate. In 2014, the labor force participation rate was about 1.2 percentage points below its estimated potential rate—the largest that gap has been during or after the most recent recession. Since 2014, the labor force participation rate has recovered considerably relative to the potential rate, though slack in participation still remains. In 2017, the labor force participation rate was roughly 0.4 percentage points below its estimated potential rate, on average.

A relatively flat labor force participation rate in recent years represents cyclical strength in the current labor market because structural changes are placing significant downward pressure on the participation rate. By far the largest source of that downward pressure is the shifting age distribution of the population toward a greater proportion of workers in years beyond the prime working years. Specifically, the potential labor force participation rate began to decline in the middle to late 1990s, just as the first cohorts of the baby-boom generation began turning 50 years old. That decline averaged about 0.1 percentage point per year through 2010. Since 2011, when the first baby-boom cohort turned 65 and entered the traditional retirement years, the potential participation rate has declined by roughly one-quarter of one percentage point per year.

The potential labor force participation rate has continued to decline through 2017. In particular, the potential labor force participation rate fell from a peak of 67.0 percent in the middle of the 1990s to 65.8 percent in the fourth quarter of 2007, just before the start of the 2007–2009 recession, and has since fallen further to 63.2 percent at the end of 2017. The potential labor force participation rate is projected to continue to fall over the next decade, declining by another 3.0 percentage points to 60.2 percent by the end of 2028. As was the case over the past 20 years, aging will continue to be a significant driver in lowering the potential labor force participation rate over the next decade.

CBO's model builds on the cohort models of Stephanie Aaronson et al. (2006), Kudlyak (2013), Stephanie Aaronson et al. (2014), and Daniel Aaronson et al. (2014). The first three studies model labor force participation by age-sex subgroups that include both age-sex and birth year (cohort)-sex fixed effects, and the fourth study models participation by age-sex-education subgroups. All of those studies

<sup>2</sup> For more information on how the labor force projections feed into CBO's estimate of potential output, see Shackleton (2018). For more information on how the labor force projections are incorporated in CBO's 10-year macroeconomic forecast, see Arnold (2018).

identify the aging of the population as the most significant factor driving down the labor force participation rate in recent years and agree that decline will probably continue into the near future.

Although aging is the largest driver of the falling labor force participation rate for people ages 16 or older in CBO's projections through 2028, aging has little effect on the projection of that rate for people ages 25 to 54. The most important factors affecting the participation rate for prime-age workers are the anticipated rise in educational attainment and the dissipation of cyclical weakness, which are estimated to more than offset downward pressures (mainly from cohort effects and disability insurance) and result in an increase of 0.5 percentage points in that rate from 2017 to 2028.

### **CBO's Approach to Estimating Labor Force Participation**

CBO projects rates of labor force participation using a model that is an extension of those used by Stephanie Aaronson et al. (2006), Kudlyak (2013), Stephanie Aaronson et al. (2014), and Daniel Aaronson et al. (2014). The first three papers estimate labor force participation rates by age-sex subgroups, whereas the fourth paper estimates labor force participation rates by age-sex-educational attainment subgroups. All four papers, however, use a cohort model to estimate those subgroup rates. Cohort models are distinguished by the inclusion of dummy variables for each birth-year cohort to model how labor force participation rates may change as each respective cohort ages through its life cycle. Those models estimate labor force participation rates for subgroups of the population using a system of equations that holds the estimated value of the cohort effects constant across certain age groups. Thus, the cohort effects are meant to capture various birth cohorts' attachment to the labor force through long periods of time.

CBO uses a cohort model that estimates labor force participation rates by age-sex-education-race/ethnicity (race hereafter) subgroups. CBO treats age groups within each sex-education-race subgroup as a separate system of equations and estimates cohort effects that are constrained across the age group equations within each system. Those constraints keep the values of the estimated cohort effects the same across all age groups within each system. Each age group equation includes an age group specific fixed effect, cohort fixed effects, and an array of time varying covariates. CBO separates cyclical variation in labor force participation rates from underlying structural trends through the time varying covariates in order to identify the potential labor force participation rate—that is, the rate that would occur if the economy's output was at its maximum sustainable amount and other inputs were at their potential rates. This section details the data used in the analysis and CBO's modeling specifications.

### **Data**

The main datasets used in the analysis are the Current Population Survey's basic monthly micro files.<sup>3</sup> The CPS is jointly sponsored by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics and is the primary source of labor force statistics for the U.S. civilian noninstitutionalized population 16 years or older.<sup>4</sup> Each month, the Census Bureau administers the survey to a probability selected sample of roughly

<sup>3</sup> Census Bureau, "Current Population Survey (CPS)," [www.census.gov/programs-surveys/cps.html](http://www.census.gov/programs-surveys/cps.html).

<sup>4</sup> The noninstitutionalized population includes all people not in the armed forces and not in institutions (such as prisons or nursing homes).

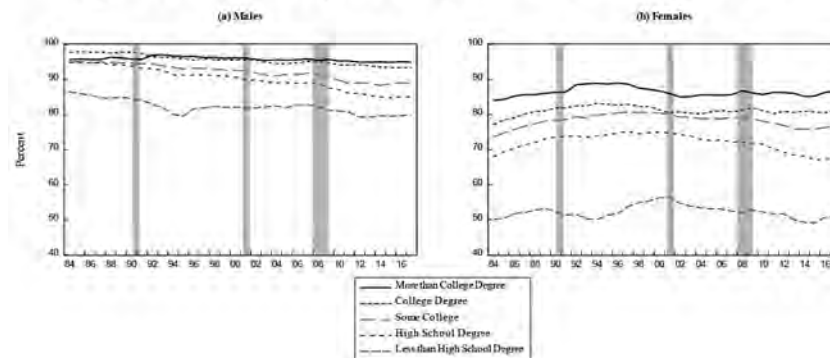
60,000 households from all 50 states and the District of Columbia, and a reference person in each household answers questions for all members of that household. Selected households participate in the survey for 4 months, rotate out of the survey temporarily for 8 months, and return to the survey for another 4 months before rotating out permanently. Respondents in their 4th and 8th months are referred to as the outgoing rotation group, since they are rotated out of the survey in the following month.

The survey questions reference the labor market activities of the household during the week that includes the 19th of the survey month. Those labor market activities include labor force participation, employment status, and school enrollment. Each month, the survey asks an additional set of questions to the outgoing rotation group subsample regarding pay and hours worked conditional on employment. For the entire sample, labor market activity questions are supplemented by a series of demographic questions that include age, sex, education level, race, marital status, and the presence of children. Although the CPS dates back to 1948, many of those questions were added to the survey much later. Because of the lack of historical data for some survey questions, the analysis in this paper spans the period from 1984 through 2017.

#### CBO's Subgroup Classifications by Age, Sex, Education, and Race

The model has 516 age-sex-education-race subgroups. First, CBO divides the population by sex. The agency next subdivides each sex into age groups. The age groups typically cover a span of five single-year ages, with exceptions for the youngest and oldest people.

**Figure 2. Labor Force Participation Rates by Educational Attainment, Ages 25 to 54**



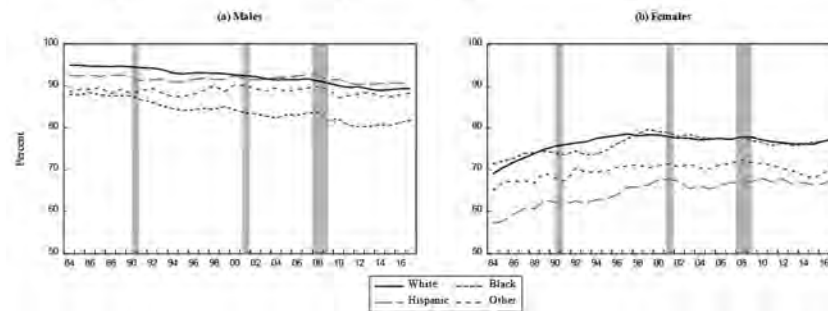
Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

CBO then divides each age-sex group into one of five levels of educational attainment spanning a range from people who have not finished high school to people with more than a bachelor's degree. Greater educational attainment is associated with greater participation in the labor market, and those differences

appear to be stark. Furthermore, differences in participation rates across levels of educational attainment appear to be growing over time, particularly for prime-age workers (see Figure 2).<sup>5</sup>

The fall in labor force participation rates of workers with less than a college degree does not appear to be a cyclical phenomenon, driven by the most recent recession, but rather part of a long-term, steady decline that started more than four decades ago for males and more than 15 years ago for females (Congressional Budget Office 2018). For example, the difference in participation rates between prime-age males with college degrees and those with high school degrees grew from about 3 percentage points in 1984 to about 8 percentage points in 2017, whereas the difference in rates for prime-age females with college degrees and females with high school degrees grew from about 6 percentage points in 2000 to about 13 percentage points in 2017.

**Figure 3. Labor Force Participation Rates by Race and Ethnicity, Ages 25 to 54**



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

Finally, CBO partitions the age-sex-education categories into four race groups: white, black, Hispanic, and other.<sup>6</sup> There are clear differences in male participation rates across some race groups. Participation

<sup>5</sup>Although differences in labor force participation rates by education group are clear for the population ages 16 or older, changes in those rates over time include factors like the aging of the population and the fact that many young workers (less than 20 years old) only have high school diplomas or less. Those factors are less relevant for the population ages 25 to 54 and allow for a better understanding as to how labor force participation rates have evolved by education.

<sup>6</sup>CBO constructs the four race categories using the CPS basic monthly file questions asking respondents to report their race and whether or not they are Hispanic. The race question has evolved significantly over the sample period. Through 1988, the surveys provided three race categories (white, black, and other) from which respondents could choose. The 1989–1995 surveys provided five categories (white, black, American Indian/Aleut Eskimo, Asian or Pacific Islander, and other). The 1996–2002 surveys provided four categories (white, black, American Indian/Aleut Eskimo, and Asian or Pacific Islander). The number of race categories expanded significantly to 21 possible responses in 2003, with the additional responses allowing for individuals to identify as more than one race (e.g., instead of requiring a respondent to choose between white or black in 2003, an individual identifying as both white and black could choose to respond “white-black” or “black-Asian”). Those categories expanded even further in May 2012, providing individuals with 26 possible responses. To classify each worker in one of the four race categories used in this paper, CBO used the following rules: Classify an individual as Hispanic if that person answers the Hispanic-ethnicity question accordingly, regardless of that individual’s response to the race question. Classify an individual as black if that person did not respond positively to the Hispanic-ethnicity question and responded to the race question with any race category that included black. Classify a person as other if that person did not respond positively to the Hispanic-ethnicity question, did not respond to the race question with a category that included black, and chose a category that included a race other than black or



rates for prime-age Hispanic males have been much higher than rates for every other category since the late 1990s (see Figure 3). Conversely, participation rates for black males have historically been much lower than rates for white males.<sup>7</sup>

Female participation rates also showed clear differences across race groups. However, those differences were the opposite of males. Whereas black males have had much lower participation rates than every other male race category, black females, along with white females, have had higher participation rates than other race categories through nearly the entire sample period. Hispanic females, conversely, have displayed the lowest participation rates among the female race categories—opposite to the pattern displayed by males.

**Table 1. Age-Sex-Education-Race Subgroups Included in the Model**

Age-Sex-Race/Ethnicity Subgroups	Educational Attainment					Total Number of Subgroups
	Less than High School Degree	High School Degree	Some College	College Degree	More than College Degree	
16 to 17; Male/Female; White/Black/Hispanic/Other	X					8
18 to 19; Male/Female; White/Black/Hispanic/Other	X	X				16
20 to 24; Male/Female; White/Black/Hispanic/Other	X	X	X	X		32
25 to 29; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
30 to 34; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
35 to 39; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
40 to 44; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
45 to 49; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
50 to 54; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
55 to 59; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
60 to 64; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
65 to 69; Male/Female; White/Black/Hispanic/Other	X	X	X	X	X	40
70 to 79; Male/Female; White	X	X	X	X	X	10
70 to 79; Male/Female; Black	X	X	X	X		8
70 to 79; Male/Female; Hispanic/Other	X	X	X			12
80+; Male/Female; White	X	X	X	X	X	10
80+; Male/Female; Black	X	X	X	X		8
80+; Male/Female; Hispanic/Other	X	X	X			12

Source: Congressional Budget Office. This table shows each of the age-sex-education-race subgroups for which CBO estimates labor force participation rates in the model. Education subgroups are omitted when the number of available responses in the CPS microdata are determined to be too few over a prolonged period to provide reliable estimates. Individuals responding as having an omitted level of education are combined with the highest non-omitted level of education for his or her particular subgroup. For example, an 18-year-old reporting as having a college degree would be reclassified into the high school degree subgroup. General education development degrees are classified as a high school degree. Those in the CPS reporting as both white and Hispanic, black and Hispanic, or other and Hispanic are classified as Hispanic.

white (e.g., Asian, American Indian, Hawaiian/Pacific Islander, etc.). Finally, classify an individual as white if that person did not respond positively to the Hispanic-ethnicity question and responded to the race question with the white-only choice.

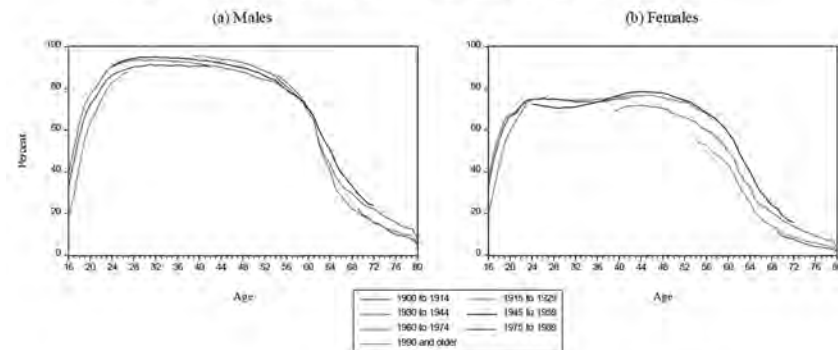
<sup>7</sup> For more on the relationship between race and labor force participation, see Altonji and Blank (1999) and Cajner et al. (2017).

Overall, those partitions yield 15 age groups for each sex-education-race subgroup (see Table 1). Some of the age-sex-education-race subgroups, though, may not have any survey respondents within a given month, making it impossible to calculate a labor force participation rate. Having no survey respondents within a subgroup is particularly common for groups that are younger than 20 years old with more than high school degrees throughout the entire sample period and for nonwhite individuals 70 or older that have high levels of education earlier in the sample period. To avoid issues in the estimation from those missing observations, some age-sex-race subgroups with higher levels of education are combined with groups having less education (e.g., 18- to 19-year-olds with some college or more are combined with 18- to 19-year-olds with high school degrees).

### CBO's Treatment of Cohort Effects

Many previous studies have shown the significance of cohort effects for long-term trends in participation.<sup>8</sup> How one specifies those effects can have considerable bearing on the historical estimates and the projections. The cohort effects are dummy variables included to capture any nonobservable structural factors that may increase or decrease an individual's likelihood of participating in the labor market throughout his or her life and that are correlated with his or her birth year.<sup>9</sup> Those effects are interpreted as a measure of a cohort's attachment to the labor force, relative to that of older and younger generations, and those varying propensities to participate are reflected in the shifts in the labor force participation rate age profiles by cohort for males and females (see Figure 4 where, for example, a declining attachment to the labor force across cohorts shows up as a downward shift in the lines).

**Figure 4. Labor Force Participation Rates by Age and Birth Cohorts**



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

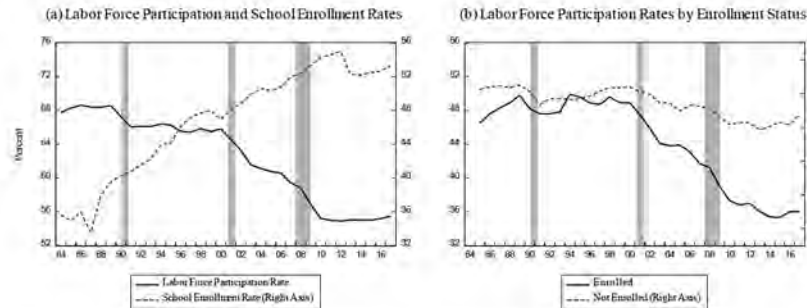
<sup>8</sup> See, for example, Goldin (2006), Stephanie Aaronson et al. (2006, 2014), Fallick and Pingle (2007), Kudlyak (2013), and Daniel Aaronson et al. (2014).

<sup>9</sup> For a detailed discussion of the necessary assumptions for identifying the fixed effects, see Fallick and Pingle (2007) and Stephanie Aaronson et al. (2014).

There are shifts in these age profiles with each successive cohort for both males and females. Male participation has fallen consistently with each successive birth cohort at each age through about 65, which can be seen by the downward shifts in the age profile lines until age 65 in panel (a) of Figure 4. Conversely, participation rates for older males have increased consistently with each successive cohort, as seen by the upward shift in the age profiles after age 65. Female participation, on the other hand, has increased considerably through the cohorts born in 1959. Since then, female participation appears to have leveled off across most age groups and has even started to consistently decline for females between ages 16 and 24 with each successive cohort.

One difficulty with the cohort model approach is reliably estimating the effect for the youngest cohorts because they have relatively few data points available (see, for example, Stephanie Aaronson et al., 2006, 2014). For instance, the sample period ending in 2017 has 16 quarters or less of data for cohorts born in 1998 or later. That issue is compounded for the recent young cohorts because of the negative effect on labor force participation caused by the 2007–2009 recession. For example, an individual born in 1991 would have turned 22 in 2007, and an individual born in 1985 would have turned 22 in that year. As a result, those individuals' primary labor market experience would have taken place during that recession and the subsequent slow recovery. For those recent cohorts, disentangling the cyclical effects from a birth-year cohort effect is particularly difficult.

**Figure 5. School Enrollment and Labor Force Participation Rates for People Ages 16 to 24**

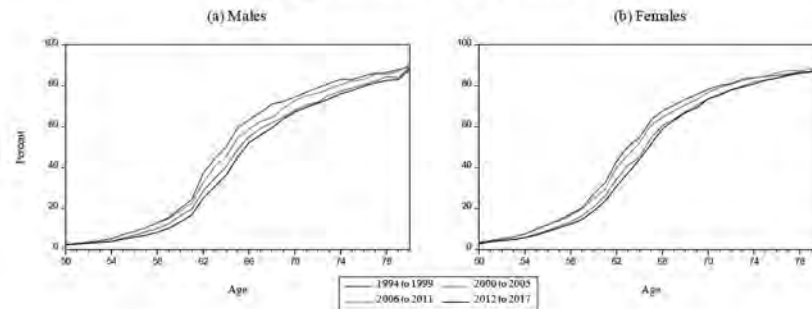


Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

Furthermore, the labor force participation rate of people ages 16 through 24 fell by 11 percentage points between 2000 and 2010, a trend driven largely by both an increase in the fraction of people enrolled in school (who have lower participation rates, on average, than others) and a persistent decline in the participation rate of enrolled people that started around 2000 (see panels (a) and (b) of Figure 5, respectively). Including enrollment as a covariate may capture the average effect on participation of an increase in the fraction of people enrolled: More young people enrolled in school should lower the participation rate of that group. However, it would not fully capture the effect of the declining participation rate of the enrolled group. That decline is likely to affect people ages 16 through 24 in the future but will probably not affect the future participation rates of the young as they age. Since this

decline started around 2000, it only affects the youngest of cohorts, who have the bulk of their observations in that age range. A cohort model might mistakenly estimate that decline as a permanent effect on that cohort. In that case, the model would project lower participation rates for those cohorts into the future rather than isolating that decline as unique to 16- to 24-year-olds.

**Figure 6. Retirement Rates, by Age, 1994 to 2017**



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics<sup>2</sup> and U.S. Census Bureau's Current Population Survey. The retirement rate is calculated as the fraction of people of each age reporting as being out of the labor force because of retirement.

A second difficulty with the cohort model approach is reliably projecting labor force participation rates for older people. Participation rates for older workers—both male and female—have increased with each successive cohort as those workers have delayed retirement (see Figure 6). However, participation rates for older males have increased while those for males under age 65 have decreased for each successive cohort.<sup>10</sup> A cohort model could attribute much of the decrease in participation rates before age 65 to the cohort-specific fixed effects. However, those cohorts would carry those cohort effects into the traditional retirement years, and the model would project lower participation rates for those cohorts relative to past cohorts even though participation rates for males have been increasing with each successive cohort.

To avoid assigning unrealistically low cohort effects to the youngest cohorts (which stem from a declining participation rate among enrolled students) and to older workers (who are participating at higher rates with each cohort), CBO splits the system into four subsets instead of estimating a system of equations including all age groups 16 or older for each sex-education-race group. Those subsets include one for 16- through 24-year-olds, a second subset for those ages 25 through 64, a third subset for those 65–79 years old, and a fourth subset for those 80 or older. For each of the first three subsets, CBO estimates the system as a standard cohort model with a cohort-specific fixed effect that is constrained across all age equations within each sex-education-race group. Thus, three separate cohort effects are estimated for a birth year: one cohort effect for when that cohort is between 16 and 24 years old, a second

<sup>10</sup> Increases in participation rates for older people can reflect a number of underlying factors, including increases in life expectancy and the health capacity to work. For example, Coile, Milligan, and Wise (2016) find that older males have an additional health capacity to work of as much as 4.2 years relative to that capacity if the relationship between mortality and employment were as it was in 1977 or of 1.8 years if the mortality-employment relationship was at its 1995 level.

cohort effect for when a cohort is in working ages between 25 and 64 years old, and a third cohort effect for when a cohort is in the traditional retirement years between 65 and 79 years old. Furthermore, the estimated cohort effect for a given cohort in the 25- to 64-year-old range is independent of the estimated cohort effects for the same cohort in either the 16- to 24- or the 65- to 79-year-old range. The 80-or-older groups have too few observations, making it difficult to discern trends in participation among the covariates. For those groups, CBO simply calculates the five-year moving average labor force participation rate over the entire sample period and uses that rate as the projection.

Estimating separate cohort effects for those age subsets gives the model additional flexibility to capture harder to quantify trends that may be causing changes in participation across cohorts at various points in the life cycle. Doing so, for example, reduces the chance of carrying into the projection the lower participation rates from the 16–24 age group that may be more related to a structural decline in participation for those enrolled in school as opposed to a lower desire among the younger cohorts to participate in the labor market throughout their lifetime. Furthermore, that treatment better captures the change in behavior of recent 16- to 24-year-olds through that subset-specific cohort effect and some of the increases in participation rates of people 65 or older that result from hard to quantify reasons such as an increasing desire for individuals to delay retirement across cohorts.<sup>11</sup>

Estimating separate cohort effects for different age subsets, however, is still subject to the concern that the cohorts just entering the system have relatively few observations available to reliably estimate cohort effects. To address that concern, CBO drops the cohort effects for the youngest 10 cohorts within each subset over the sample period and extrapolates those cohort effects from the nearest next-oldest 5 cohorts.<sup>12</sup> Similarly, a lack of data for the oldest cohorts at the beginning of the sample makes the identification of their cohort effects difficult as well.<sup>13</sup> To avoid that identification issue, CBO drops the estimated cohort effects of the oldest 10 cohorts and instead linearly extrapolates those cohort effects from the next-youngest 5 cohorts.

### Model Specifications

The model is specified so that the unit of observation is an age-sex-education-race group in a given quarter. The estimation procedure in all cases uses ordinary least squares with quarterly data from 1984 through 2017.

The model is estimated separately for each sex-education-race subgroup. The exact specification of the model for each of those subgroups differs by age group. The model for 25- through 64-year-olds uses a

<sup>11</sup> Individuals' delaying of retirement is likely the result of a number of factors, some easier to quantify than others. For example individuals may delay retirement as Social Security's full retirement age increases and payout ratios at different ages change. Those changes in payout ratios are easily quantifiable, so CBO models them in the participation equation for older workers. Other reasons, such as changing social attitudes toward working at older ages, are much harder to quantify and better estimated through a cohort effect.

<sup>12</sup> This follows the convention of Stephanie Aaronson et al. (2014). CBO's approach differs from that one, however, in that it only models separate cohort effects for three age subsets and drops the youngest and oldest 15 cohorts of those groups, whereas Stephanie Aaronson et al. (2014) models cohort effects for all people ages 16 or older but drops the youngest and oldest 10 cohorts. There is no clear consensus in the literature on how to handle the cohort effects for the youngest and oldest cohorts. Daniel Aaronson et al. (2014), for example, does not drop any of the estimated cohort effects.

<sup>13</sup> For example, the cohort born in 1908 has only a few observations in a sample beginning in 1984.

system of 9 equations, one for each of the 9 age groups in a sex-education-race subgroup. Those equations include cohort effects that are constrained to take the same value for all equations within each system. The base specification for each of those equations has the log of the average labor force participation rate of an age group during a calendar quarter explained by the following sets of variables:

- An indicator for the age group;
- Cohort fixed effects, which indicate whether people with a particular year of birth are in the age group during the calendar quarter and which are scaled by the number of single-year ages within each age group;
- Structural variables including measures of disability status, marital status, presence of young children, and other factors that vary over time; and
- Measures of the business cycle that vary over time—specifically a four-quarter lagged moving average of the aggregate unemployment rate gap in the contemporaneous quarter and that gap four and eight quarters earlier.<sup>14</sup>

The scaling by the number of single-year ages for the cohort effects is used because each age group includes individuals from multiple cohorts in any year. For example, the 30- to 34-year-old group contains individuals from 5 cohorts, and the 60- to 64-year-old group contains individuals from 2 cohorts. To account for the multiple cohorts, CBO scales the estimated birth cohorts by one-fifth in the first case and by one-half in the second case.

The equations for 16- to 24-year-olds and for 65- to 79-year-olds are each estimated as separate systems that have the same structure as those for 25- to 64-year-olds. For 16- to 24-year-olds, the system has three equations for the three age groups in each sex-education-race subgroup, whereas the system for 65- to 79-year-olds has two equations for the two age groups in each sex-education-race subgroup.

For people 80 or older, the model estimates their labor force participation rate using the historical five-year moving average for each sex-education-race subgroup and holds that average constant for the projection.

Furthermore, some subgroups, while having survey respondents in each period of the sample, routinely have so few respondents that it is hard to get reliable calculations of those subgroups' participation rates in any given period, and the calculated participation rates of those less populated groups can fluctuate drastically from quarter to quarter. That noise can be problematic for obtaining reliable coefficient estimates that are useful for projections. However, simple averages of the participation rates of those subgroups over time may help reduce the noise in those rates and provide more reliable estimates than estimating them within the system. Thus, to avoid any issues that noise from those less populated subgroups can create in estimating the system of equations, CBO removes those groups from the system and simply estimates each group's labor force participation rate using that group's historical five-year moving average and holds that average constant for the projection.<sup>15</sup>

<sup>14</sup> The unemployment rate gap is defined as the difference between the quarterly average of the observed U-3 unemployment rate as reported by the Bureau of Labor Statistics minus CBO's estimate of the natural rate of unemployment—that is, the rate of unemployment that would occur if the economy were at its maximum sustainable level of output.

<sup>15</sup> To determine which groups' participation rates are too noisy to include in the system, CBO subtracts each subgroup's observed participation rate for a particular quarter from its 10-year centered moving average. CBO then calculates the standard deviation of

Finally, it is important to note that educational attainment is not strictly exogenous to the system in the same way as age, sex, and race—that is, the level of educational attainment is a choice variable that individuals can change in response to such developments as changes in the economy. For example, changing industry structure or cyclical fluctuations in output may spur some individuals to pursue more education with hopes of improving their labor market prospects; that adjustment would change the shares of people with different levels of education. That choice is not explicitly included in the model.

**Table 2. Explanatory Variables Included in Each Age-Sex-Education-Race Equation**

Explanatory Variables	Included in:
Birth-Year Cohort Effects	Ages 16 to 79, Males and Females, All Education Levels, All Race Categories
Social Security Disability Insurance	Ages 18 to 64, Males and Females, All Education Levels, All Race Categories
Social Security Payout Rate	Ages 62 to 79, Males and Females, All Education Levels, All Race Categories
Family Structure:	
Married Males	Ages 18 to 79, Males, All Education Levels, All Race Categories
Married Females with Young Children	Ages 18 to 54, Females, All Education Levels, All Race Categories
Not Married Females with Young Children	Ages 18 to 54, Females, All Education Levels, All Race Categories
Married Females without Young Children	Ages 18 to 79, Females, All Education Levels, All Race Categories
School Enrollment	Ages 16 to 24, Males and Females, All Education Levels, All Race Categories
Real Wage	Ages 16 to 79, Males and Females, All Education Levels, All Race Categories
Minimum Wage-Median Wage Ratio	Ages 16 to 24, Males and Females, All Education Levels, All Race Categories; Ages 25 to 79, Males and Females, Some College or Less, All Race Categories
Federal Fiscal Policy*	Males and Females, Ages 16 to 64, All Education Levels, All Race Categories
Cyclical Variables	All Age-Sex-Education-Race Equations**

Source: Congressional Budget Office.

\*The federal fiscal policy effect is not an explanatory variable. Rather, it is an estimate of the labor supply effects of fiscal policy (including the Affordable Care Act and P.L. 115-97) calculated outside of the model that is added on to the estimates of the labor force participation rates after the model is estimated. For a more detailed discussion, please see the text.

\*\*This table refers to estimated equations and does not reference the few subgroups that are not estimated but instead have their predicted observed and potential values set equal to the historical sample average.

### Population by Age, Sex, Education, and Race

CBO tabulates historical population levels for each age-sex-education-race subgroup using the CPS basic monthly files. To calculate quarterly population levels for those groups, CBO simply averages the monthly values for each group across the months in each quarter. The sum of the population levels across all groups equals the total civilian noninstitutionalized population for all individuals 16 years or older.

CBO projects population using a starting population by single year of age and sex. CBO uses its own projections of mortality, fertility, immigration, and emigration rates to project that starting population.

that de-trended series for each group, ranks each group by standard deviation from smallest to largest, and removes the groups in the upper fifth percentile of that ranking from the estimated system.

More specifically, the population of any given age and sex this year equals last year's population for that group minus the number of deaths plus the net number of immigrants.<sup>16</sup>

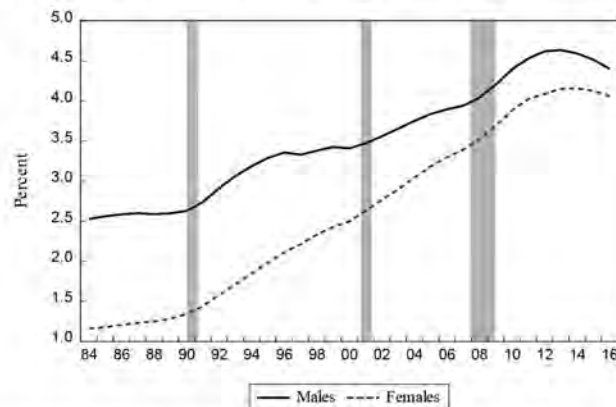
CBO projects educational attainment using the methodology of Aaronson and Sullivan (2001). That method estimates birth cohort trends in each of the five levels of educational attainment for each sex-race group used in this analysis. That method also estimates an age effect that is constant across birth cohorts but differs by sex and race.

CBO uses projections of the racial-ethnic composition of the population by sex and age from the U.S. Census Bureau (2014).

### Structural Variables

CBO includes a number of additional covariates in each equation to help explain the apparent structural changes in the labor force participation rates. Because some variables are likely to affect only certain subgroups, not all structural variables enter each equation (see Table 2). All historical values for the structural variables are calculated from the CPS micro data files unless otherwise noted.

**Figure 7. Disability Insurance Take-Up Rate, by Sex, for People Ages 18 to 64**



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey and the Social Security Administration's data on disability caseloads.

**Social Security Disability Insurance.** Federal Social Security Disability Insurance (SSDI) provides a means of income replacement for those people deemed physically or mentally unable to work and thus reduces the incentive for eligible individuals to participate in the labor market. Furthermore, because the income-replacement rate for any potentially eligible individual is proportional to that individual's wage

<sup>16</sup> For more information about CBO's demographic projections, see Appendix A of *The 2017 Long-Term Budget Outlook* (March 2017), [www.cbo.gov/publication/52480](http://www.cbo.gov/publication/52480).



history and scaled to the economywide rate of average wage growth, individuals with low wages have much higher replacement rates than their higher wage counterparts.<sup>17</sup> As a result, the incentive to forgo paid employment and collect disability benefits is higher for less educated workers.

The share of people ages 18 through 64 receiving disability insurance benefits has trended upward over time (see Figure 7). Thus, CBO includes the fraction of individuals of those ages receiving SSDI for each age-sex-education-race subgroup.<sup>18</sup> Data on SSDI caseloads by age and sex come from the Social Security Administration. To calculate disability insurance take-up rates by age-sex-education-race, CBO multiplies the education-race shares calculated for each age-sex group in the CPS by the level of disability caseloads in the Social Security Administration's data to arrive at estimates of disability caseloads for each age-sex-education-race subgroup.

For the forecast period, CBO projects SSDI caseloads by age and sex based on CBO's projections of population growth and past trends in SSDI receipt. To calculate projections by age-sex-education-race, CBO extrapolates the education-race distribution within each of those subgroups from the distribution over the past 10 years.

*Social Security Primary Insurance Amount Payout Ratio.* CBO includes the Primary Insurance Amount (PIA) associated with Old Age and Survivors Insurance (OASI)—that is, the Social Security payout rate—for all sex-education-race groups of people ages 62 through 79. As shown in Figure 6, retirement rates increase rapidly once people are in their early 60s and continue that rapid increase through people's late 60s. Those retirement decisions are influenced by workers' eligibility to collect Social Security benefits and by the generosity of those benefits. The payout rate depends on a person's age when he or she retires. At the full retirement age, an individual can receive a full benefit amount.<sup>19</sup> Individuals can start collecting OASI at age 62 by claiming early retirement, but individuals who do so (claiming from age 62 up until the full retirement age) receive less than the full benefit amount. Conversely, individuals can delay retirement past the full retirement age and receive a benefit greater than the amount available at the full retirement age.

To calculate this variable, CBO includes the weighted average payout rate an individual would receive if he or she retired in a given age group each year, where the weight in each age group is the fraction of the total age group population that is a given age.<sup>20</sup> The projection of this variable is set equal to the Social Security payout rate schedule under current law.

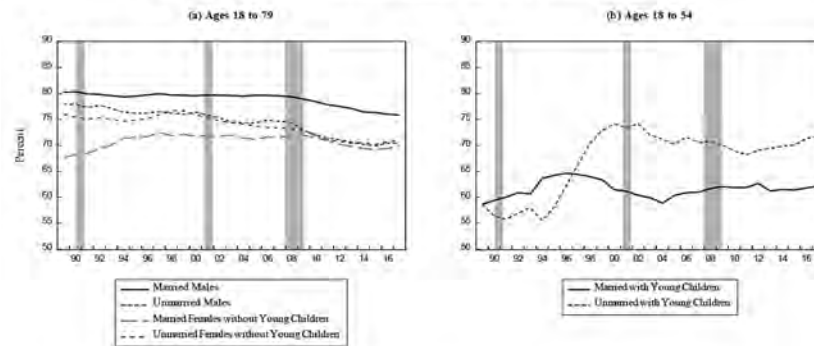
<sup>17</sup> For more details, see Autor and Duggan (2003) and Autor and Duggan (2006).

<sup>18</sup> Since 2003, age 65 is the maximum age at which an individual can collect disability insurance before being converted to retired worker status (at which point the individual is eligible to receive old-age insurance). Before 2003, eligibility for old-age insurance began at age 65 and eligibility for disability insurance ended at age 64.

<sup>19</sup> The full retirement age is 65 for people born in 1937 or earlier; it gradually increases to 67 for people born in 1960 or later.

<sup>20</sup> For example, the payout rate for the 62- through 64-year-old age group for a given year is calculated as the weighted average of the payout rates of 62-, 63-, and 64-year-olds in that year, where the respective weights are the 62-, 63-, and 64-year-olds' share of the total 62- through 64-year-old population.

Figure 8. Labor Force Participation Rates, by Family Structure



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

*Family Structure.* The impact of family structure on labor force participation varies by sex. Because married males participate at higher rates than unmarried males, CBO includes one covariate for the fraction of married males in the equations for males 18- to 79-years-old (see panel (a) of Figure 8). Because observed participation rates dip for females at ages when it is most likely for a female to have a young child present in the household, CBO includes a covariate for the fraction of females ages 18 to 79 who are married without a child 5 years old or younger present in the household. As Stephanie Aaronson et al. (2014) point out, the labor force participation rates for females with young children appear to differ depending on whether the female is married or not (see panel (b) of Figure 8); to account for the association between participation and the presence of young children, CBO follows their convention and includes covariates for the fraction of females who are married and have a child 5 years old or younger and the fraction of females who are unmarried with a child 5 years old or younger.<sup>21</sup> CBO includes the two variables that indicate the presence of a young child for 18- to 54-year-old females.<sup>22</sup>

CBO forecasts the family structure variables as part of its long-term microsimulation model used in its long-term budget outlook. For more details, see Appendix A in Congressional Budget Office (2017).

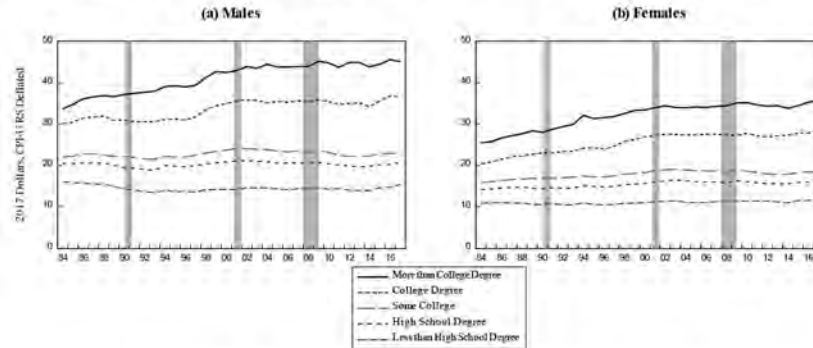
*School Enrollment.* CBO includes the fraction of each subgroup's population that is currently enrolled in a high school or a college/university for males and females ages 16 through 24. CBO only includes school enrollment for the younger ages because younger individuals are much more likely to be enrolled in

<sup>21</sup> In particular, participation rates since 2000 for females who are unmarried with young children have been about 10 percentage points higher, on average, than rates for females who are married with young children.

<sup>22</sup> In the middle of the 1990s, the labor force participation rate of unmarried females between the ages of 18 and 54 with young children grew substantially, surpassing the labor force participation rate of married females with young children. Those increases were largely because of the 1993 expansion of the earned income tax credit (EITC), which provides wage subsidies to the lowest income workers, and enactment of the Personal Responsibility and Work Opportunity Reconciliation Act in 1996, which increased the incentives for unmarried parents with children to work. For more on how expansions of the EITC and other welfare reforms of the 1990s affected labor supply and employment, see, for example, Dickert, Houser, and Scholz (1995), Meyer and Rosenbaum (2001), Ellwood (2000), and Grogger (2003).

school than older individuals and to have their enrollment decisions affect their labor force participation.<sup>23</sup> Although enrollment rates increased significantly since 2000, nearly all of the increase occurred through 2012. Since the end of the most recent recession, the trend in school enrollment has been flat. Thus, for the forecast period, CBO holds enrollment rates constant at their last observed value.

**Figure 9. Real Average Hourly Wages, by Workers' Sex and Educational Attainment**



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey. Nominal wages are deflated using the research series for the consumer price index for all urban consumers (CPI-U RS).

*Real Hourly Wage.* Long-run shifts in the demand for workers of different education levels may also cause changes in the number of people supplying labor, with increases in the demand for workers with certain levels of education potentially boosting the participation of those groups and decreases in the demand for workers with other levels of education reducing the participation of those groups. All else being equal, changes in participation of a particular group that stem from long-run shifts in the demand for that group's labor should be reflected in corresponding changes in its real (inflation-adjusted) wage rate over time: Real wages should fall in response to a reduction in the demand for a group's labor (increasing the opportunity cost of nonwork activities, thus reducing the amount of labor supplied) and rise in response to an increase in demand (thus increasing the supply of labor). Indeed, real average hourly wages (in 2017 dollars) for the least educated males either fell or stagnated over the past 35 years, whereas real wages for the most educated males (college degree holders or more) increased by more than 30 percent (see Figure 9). Thus, movements in real wages by education level provide suggestive evidence of shifts in the long-run labor demand for those groups.<sup>24</sup>

<sup>23</sup> School enrollment rates have been increasing among 20- to 24-year-olds over the past 15 years. That increase, coupled with the continued increase in the proportion of the population with more than a college degree, suggests that school enrollment rates and their effect on the labor force participation decision may be becoming more meaningful for people older than 24. Unfortunately, for respondents ages 25 through 54, the CPS did not start asking until 2013 whether a respondent is currently enrolled in school. Before 2013, the survey response was limited to 16- through 24-year-olds.

<sup>24</sup> Research has focused on technological change as the key long-run driver decreasing the demand for less educated workers. To the extent that educational attainment is associated with job-related skill, improving technology has increased the relative return of high-skilled to low-skilled labor, thus reducing the demand for low-skilled workers and increasing the demand for high-skilled

CBO includes the log average real hourly wage earned by each age-sex-education-race group as calculated in the CPS outgoing rotation group files, converted to 2017 dollars using the research series for the consumer price index for all urban consumers (CPI-U). These variables are meant to proxy for the relative demand shocks for workers of different education or skill levels and capture the incentive to work.

CBO projects the average real hourly wage rate for each age-sex-education-race subgroup using a model similar to that of Card and Lemieux (2001). Variation in the supply of hours by skill and age groups and of relative wage rates are used to estimate two substitution parameters of an aggregate production function and a trend growth in relative demand. Card and Lemieux assumed a fixed relative efficiency of, for example, education and sex groups within skill levels. CBO's variation of their model allowed these relative efficiencies to continue.

*Minimum Wage.* Changes in the real minimum wage may affect labor force participation by increasing or decreasing the opportunity cost of nonparticipation, particularly for groups with lower wages.<sup>25</sup> Thus, CBO includes the ratio of the effective minimum wage to the median level of hourly earnings for all 16- to 24-year-old subgroups and for the 25-or-older subgroups with education levels of some college or less. The effective minimum wage is calculated as a population-weighted average of the state-level effective minimum wage, where the effective state-level minimum wage is the maximum between the federally mandated minimum wage and the state-level minimum wage. CBO accounts for future changes in state minimum wages that are already written into law in the projection of the effective minimum wage.

### Business Cycle Variables

To quantify participation rates' comovement with the business cycle, CBO uses the aggregate unemployment gap, which is the difference between the observed unemployment rate and CBO's estimate of the natural rate of unemployment. A positive unemployment gap signifies a cyclically weak labor market, whereas a negative unemployment gap signifies a cyclically strong labor market. To allow the

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workers as reflected in the relative wages of those workers (Katz and Murphy, 1992). Those declining economic opportunities for less educated workers, as evidenced through stagnating real wages, have reduced the incentive for those groups (particularly males) to participate in the labor market (Juhn, 1992).

More recently, technological change in the form of automation has reduced the demand for workers performing routine tasks that follow clear rules and can easily be computerized (Autor, Levy, and Murnane, 2003; Acemoglu and Autor, 2011). Routine jobs include manual jobs such as factory workers operating machines but also more cognitive, white-collar jobs such as bookkeeping that have historically been in the middle of the skill distribution. Thus, automation substitutes for workers with those skills. At the same time, automation tends to complement workers performing less routine and more complex tasks that require creativity, problem solving, and communication skills. Less routine jobs include professional and management occupations, which have historically been on the high end of the skill distribution, but also service occupations that have historically been on the lower end of the skill distribution. This "job polarization" has further increased the relative demand for more educated workers and decreased the relative return of less educated workers. For the less educated, this may result in an increase in nonemployment or nonparticipation of these workers or a reallocation into low-wage jobs (Cortes, Jaimovich, and Siu, 2017). In addition, there is evidence that job polarization speeds up during recessions (Jaimovich and Siu, 2012; Hershelein and Kahn, 2016), which is consistent with the observed pattern that the long-term fall in participation rates of less educated males is concentrated during and immediately after recessions.

<sup>25</sup> For example, a higher real minimum wage, all else being equal, increases the opportunity cost of leisure relative to work, thus encouraging more people to seek work. However, increases in the real minimum wage may also make it more costly for firms to employ workers, thus reducing the likelihood that a person seeking work finds a job (translating to higher unemployment). This model does not account for possible changes in unemployment from changes in the real minimum wage.

labor force participation rate to respond asymmetrically to positive and negative unemployment gaps, the model includes two variables: the unemployment gap multiplied by an indicator for a positive gap (that is, for a slack labor market) and the unemployment gap multiplied by an indicator for a negative gap (that is, for a tight labor market). In addition to the contemporaneous values of the positive and negative unemployment gaps, CBO also includes lags of those variables at 4 and 8 quarters in each equation to capture the dynamic response of participation to business cycle fluctuations. Finally, to capture the information between the contemporaneous quarter and quarters 4 and 8, CBO uses four-quarter moving averages of those terms. The forecast for the unemployment gap is taken from CBO's latest 10-year macroeconomic forecast.<sup>26</sup>

### Estimation Results and a 10-Year Forecast

This section discusses the results of the estimation and presents the model's forecasts of the actual and potential labor force participation rates for the working-age and prime-working-age populations. The estimation results show how well the model explains historical values of the aggregate participation rate and how much each factor in the model contributes to the model's explanation.

The forecasts in this paper will not appear in CBO's forthcoming economic projections, to be published in April 2018.<sup>27</sup> Those projections will be based on a previous version of this model. However, the model presented in this paper is similar to that previous version and is expected to be very similar to that used as the basis of CBO's next labor force participation rate projections.

The projections produced by the model show the labor force participation rate for individuals at least 16 years old continuing its trend decline from the past two decades, falling from an average rate of 62.8 percent in 2017 to 60.1 percent in 2028. The trend decline in the observed participation rate, though, is not expected to resume until after 2019. Over the next few years, the observed rate is projected to remain roughly constant, as it has over the past four years. That temporary constant rate reflects the balancing of cyclical factors that are pushing the rate up and long-term structural factors that are pushing the rate down.

The aging of the population is the most significant structural factor causing the decline in the aggregate participation rate over recent history and for the coming decade, although other structural factors, such as cohort effects and increases in disability rates, play a role, too. The results also show that cyclical effects stemming from the 2007–2009 recession led to a large decline in the participation rate over the past decade, though the cyclical decline from the recession has largely abated and is now putting upward pressure on that rate.

CBO also projects that the long-term declines in participation rates among the less educated are likely to continue over the next decade. CBO expects, however, that populationwide increases in educational attainment will mitigate the effect of those declines on the aggregate participation rate.

<sup>26</sup> See Congressional Budget Office (2017).

<sup>27</sup> See Congressional Budget Office (forthcoming).

### Estimation Results: Historical Fit of the Labor Force Participation Rate

Although there are too many equations to present summary statistics for each one, the overall fit of the model, as reflected in the mean absolute and root mean square errors of the participation rate for people who are at least 16 years old is close, but the fit does vary over subsamples (see the first two columns of results in Table 3). For example, the mean absolute error is about 0.2 and the root mean square error is about 0.3 for the entire sample period, but the estimated rate best fits the data from 2001 through the middle of 2007, when the mean absolute error was about 0.1 and the root mean square error was about 0.2. The mean absolute error is larger in the subsamples from the middle of 1990 through the end of 2000 and from the end of 2007 through the end of 2017, whereas the root mean square error is larger over the first half of the sample.

**Table 3. Model Fit: Mean Absolute Error and Root Mean Square Error**

Sample Period	Population at least 16 Years Old		Population 25 to 54 Years Old	
	Mean Absolute Error	Root Mean Square Error	Mean Absolute Error	Root Mean Square Error
1984q1-2017q4	0.22	0.29	0.22	0.28
1984q1-1990q2	0.18	0.30	0.14	0.17
1990q3-2000q4	0.32	0.36	0.28	0.34
2001q1-2007q3	0.13	0.16	0.12	0.16
2007q4-2017q4	0.21	0.27	0.27	0.33

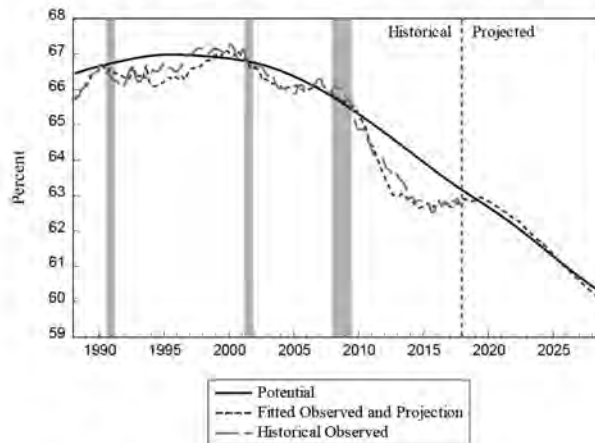
Sources: Congressional Budget Office; author's calculations.

Subsamples are chosen to coincide with peak-to-peak business cycles. The exception is the first subsample, which starts with the sample at the beginning of 1984 and goes through the end of that cycle in 1990q2.

Another way to measure the performance of the model is to compare its estimate of the participation rate to the observed historical rate. CBO computes the aggregate rate in a given quarter by summing the fitted values for that quarter from each of the model's 516 groups for that quarter, weighted by that group's share of the population.

The model fits the historical data well throughout most of history (see Figure 10). Interestingly, comparing the fitted rate with the observed rate in Figure 10 shows that the model fits the data well for most of the period from the end of 2007 through 2017 and that the larger mean absolute and root mean square errors for that period are the result of a larger miss from the middle of 2011 through the middle of 2013. For example, both the model's fitted values and the observed historical rate are at about 66 percent in the fourth quarter of 2007, and the fitted model nearly mirrors the fall in the observed rate through the second quarter of 2011. From the third quarter of 2011 through the third quarter of 2013, the model *over* predicts the fall in the observed participation rate. Its largest miss over that period is for the fourth quarter of 2012, as it predicts a rate 0.7 percentage points below the observed 63.7 percent. The predicted and observed rates again converge by the fourth quarter of 2013, and the two rates are nearly identical through the end of the sample.

Figure 10. Aggregate Labor Force Participation Rate



Sources: Congressional Budget Office; author's calculations using information from the Bureau of Labor Statistics<sup>28</sup> and U.S. Census Bureau's Current Population Survey.

Before 2007, the model still fits the observed data well, on average, but shows a few periods of prolonged misses. Again, the larger mean absolute and root mean square errors for the period from the middle of 1990 through the end of 2000 is the result of a shorter miss in the middle of that decade rather than a prolonged miss over the entire decade. The most prolonged deviation of the predicted from the observed rate occurs from 1994 through 1998, when the predicted rate stays about 0.4 percentage points below the observed rate. After 1998, the predicted and observed rates converge and are almost identical through 2007, with only small deviations in a few quarters.

#### Estimation Results: History and Projection of the Potential Labor Force Participation Rate

The model can be used to compute an estimate of the potential rate of labor force participation, a measure of the participation rate that removes the effects of the business cycle in order to focus on the effect of structural factors.<sup>28</sup> That estimate increases through the middle of the 1990s.<sup>29</sup> The potential rate then starts an uninterrupted fall in the latter half of the 1990s that is projected to continue through at least 2028. That decline results from the aging of the baby-boom generation. Specifically, the start of the decline coincides with the first cohorts of the baby-boom generation turning 50 years old, roughly the age

<sup>28</sup> Mechanically, the potential labor force participation rate for any subgroup is calculated by setting the cyclical terms equal to zero in that group's estimated equation and using only the structural terms to calculate the predicted value. Then, the overall potential labor force participation rate is calculated by taking a weighted sum of each subgroup's potential rate, where the weights are each group's share of the total population.

<sup>29</sup> CBO smooths each subgroup's potential labor force participation rate using a Hodrick-Prescott filter. Once CBO aggregates those smoothed subgroups to the overall potential labor force participation rate, the agency then smooths once more using the HP filter with a smoothing parameter of 1,600.

at which labor force participation rates begin to fall along the age profile, as can be seen in Figure 2. Thus, as many studies have shown, a large part of that fall stems from the aging of the baby boomers out of their working years and into their retirement years.

Over the period from the fourth quarter of 2007 (just before the start of the most recent recession) through 2017, the aggregate potential participation rate—which measures the effect of structural factors, including the aging of the population, on the labor force participation rate—fell by about 2.6 percentage points, from 65.8 percent to 63.2 percent, as shown in Table 4. Males contributed the most to that decline, though the decline was significant for females, too. Moreover, there is considerable heterogeneity in the potential labor force participation rates by subgroups. For example, the potential participation rate for the young (people 16 to 24 years old) fell by 1.8 percentage points from the fourth quarter of 2007 through the fourth quarter of 2017. The potential participation rate for people 65 years or older increased substantially over the past 10 years, by about 3.1 percentage points. Finally, the potential participation rate for prime-age individuals fell by 0.8 percentage points from the end of 2007 through the end of 2017, with the potential rate for prime-age males falling by almost two times as much as the potential rate for prime-age females. The estimates for prime-age people are explored below in more detail.

**Table 4. Changes in the Potential Labor Force Participation Rate, 2007q4-2028q4**

		Potential Labor Force Participation Rate				
		Levels (Percent)			Changes (Percentage Points)	
		2007q4	2017q4	2028q4	2007q4 - 2017q4	2017q4 - 2028q4
16 Years or Older	Total	65.8	63.2	60.2	-2.6	-3.0
	Males	72.7	69.3	66.4	-3.4	-2.9
	Females	59.5	57.5	54.5	-2.0	-3.0
16 to 24 Years Old	Total	60.0	58.2	58.2	-1.8	0.1
	Males	62.1	59.9	59.9	-2.3	0.0
	Females	57.8	56.5	56.5	-1.3	0.0
25 to 54 Years Old	Total	82.9	82.0	82.3	-0.8	0.3
	Males	90.2	89.1	89.3	-1.1	0.2
	Females	75.8	75.2	75.6	-0.6	0.4
55 to 64 Years Old	Total	63.8	63.8	64.0	0.1	0.2
	Males	69.4	68.3	69.0	-1.1	0.7
	Females	58.5	59.7	59.4	1.2	-0.3
65 Years or Older	Total	16.1	19.2	17.2	3.1	-2.1
	Males	20.8	23.9	21.7	3.2	-2.2
	Females	12.7	15.4	13.3	2.7	-2.1

Sources: Congressional Budget Office; author's calculations using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey. The numbers in the table may not sum because of rounding.

The model predicts that, over the next decade, the potential labor force participation rate will continue to fall. In particular, the potential labor force participation rate is expected to reach 60.2 percent by the fourth quarter of 2028, a 3.0 percentage-point fall from its estimated value in the fourth quarter of 2017.



CBO expects both males and females to contribute significantly to that decline. Interestingly, the potential rate for prime-age workers is projected to increase by about 0.3 percentage points over the next decade, with the potential rate for prime-age males increasing by about 0.2 percentage points and the potential rate for prime-age females increasing by 0.4 percentage points. The sources behind these changes in both the overall and prime-age rates are discussed in detail below.

### **Estimation Results: Aggregate Labor Force Participation Rate Decomposition**

A decomposition of the estimate of the labor force participation rate into its component parts can help shed light on this continued downward pressure on the participation rate. Following the 2007–2009 recession and the subsequent slow recovery, a key question is how much of the fall in participation since 2007 is the result of the aging of the population versus other structural factors. A second key question is how much of the fall is the result of cyclical weakness associated with fluctuations in the business cycle that would disappear as the labor market recovers.<sup>30</sup>

#### **Decomposition: Structural Factors**

The model allows for the decomposition of the change in the potential rate over any given period into the changes from the age, sex, educational attainment, and race distributions, the cohort fixed effects, and the observed structural variables. The estimated potential labor force participation rate is constructed by setting the cyclical terms in the equation equal to zero and then calculating the rate that corresponds only to the structural factors. CBO examines two periods: the fourth quarter of 2007 to the fourth quarter of 2017 (recent history), and the projection period through the end of 2028 (see Table 5).

*Age Distribution.* By far the largest driver of the fall in the potential participation rate since the 2007–2009 recession and over the next decade is the aging of the baby boomers into retirement. That demographic development reduced the aggregate potential participation rate by 2.5 percentage points from the end of 2007 through the end of 2017, all else being equal, and is expected to reduce the aggregate labor force participation rate by an additional 2.8 percentage points over the next decade. That is, the aging and retirement of the baby-boom generation make up 95 percent of the projected 5.6 percentage-point fall in the potential participation rate from the end of 2007 through the end of 2028. For perspective, the next largest driver of the potential participation rate over that period is the changing educational attainment distribution, which is projected to increase the potential participation rate by roughly 1.9 percentage points, or one-third of the magnitude attributed to aging.

*Sex Distribution.* The evolving sex distribution is estimated to have a very small, albeit positive effect on the potential participation rate—roughly 0.1 percentage point over the past 10 years and another 0.1 percentage point over the next 10 years. This quantitatively small effect is not surprising, though, as the male share of the civilian noninstitutionalized population has increased slightly over recent history and is

<sup>30</sup> Relatedly, Abraham and Kearney (2018) examine why the overall employment-to-population ratio declined between 1999 and 2016, studying many of the same dimensions as this paper does on the labor force participation rate. They highlight the importance of aging in contributing to the decline in the employment-to-population ratio, but also the importance of within-age-group declines. Their review of the evidence suggests the most significant factors are changes in the labor demand for certain skill groups because of exposure to international trade and increases in the use of robotics in production. They also find that increases in participation in disability insurance programs played a smaller but nontrivial role.

projected to continue that trend into the next decade.<sup>31</sup> Because males have higher potential rates of participation in history relative to females and are projected to continue having higher rates than females, this compositional change increases the overall potential labor force participation rate.

*Educational Attainment Distribution.* The educational attainment distribution is estimated to have increased the potential participation rate by 0.9 percentage points from 2007 through the end of 2018 and is projected to continue increasing the potential labor force participation rate by an additional 1.0 percentage point through 2028. The increase in educational attainment has largely been driven by an increase in the proportion of the population attaining bachelor's degrees, and CBO expects that trend to continue over the projection period. Together, the changing age and educational attainment distribution contributed toward a net 1.6 percentage-point decline in the potential participation rate since 2007 and is expected to contribute toward a further net 1.8 percentage-point decline in the aggregate participation rate over the projection period.

**Table 5. Decomposing the Change in the Potential Labor Force Participation Rate, 2007q4-2028q4**

Explanatory Variables	Contribution to Change (Percentage Points):	
	History 2007q4 → 2017q4	Projection 2017q4 → 2028q4
Age Distribution	-2.5	-2.8
Sex Distribution	0.1	0.1
Educational Attainment Distribution	0.9	1.0
Race/Ethnicity Distribution	-0.1	-0.1
Birth-Year Cohort Effects	-0.4	-0.4
Disability	-0.3	-0.1
PIA Ratio	-0.1	-0.3
Married Males	-0.3	-0.1
Married Females with Young Children	0.1	0.0
Not Married Females with Young Children	0.0	0.0
Married Females without Young Children	0.1	0.0
School Enrollment	-0.1	0.0
Real Wage	0.0	-0.1
Minimum Wage-Median Wage Ratio	0.0	0.0
Federal Fiscal Policy	-0.3	0.0
Interaction Residual	0.3	-0.1
<b>Total Change</b>	<b>-2.6</b>	<b>-3.0</b>

Sources: Congressional Budget Office; author's calculations using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

*Race/Ethnicity Distribution.* The evolution of the race and ethnicity distribution is estimated to have contributed to a small decline of about 0.1 percentage point in the overall potential labor force participation rate over the past 10 years. Over the next 10 years, the further evolution of that distribution is projected to lower the potential participation rate by another 0.1 percentage point. These small effects are the counterbalancing of two trends within the distribution. Among males, the share of Hispanics has

<sup>31</sup> The share of the civilian noninstitutionalized population that is male has been rising since the 1980s, which is probably driven by changes in the mortality rates for men and women. Since 1950, males and females have had similar average improvement in mortality rates. Rates for females, however, improved earlier in that period (before 1980), and rates for males improved later in the period (after 1980). That is largely because of smoking, which males tended to take up earlier and quit somewhat earlier.

increased and is expected to continue to increase while the share of whites has decreased and is expected to continue to decline. Because Hispanic males participate at higher rates than any other racial/ethnic group, a composition shift from white to Hispanic males raises the overall participation rate. This change in composition toward a higher share of Hispanics is similar for females. However, Hispanic females have historically participated at lower rates than white females, so this compositional change puts downward pressure on the overall participation rate. These changes together largely balance each other out.

*Cohort Effects.* The cohort effects are meant to capture any nonobservable factors that may increase or decrease an individual's likelihood to participate in the labor market throughout that individual's life and are interpreted as a measure of a cohort's attachment to the labor force, relative to that of older and younger generations. The cohort effects contribute to changes in the potential participation rate over time as older cohorts leave the labor force and new, young cohorts enter the labor force. The estimated cohort effects reduce the aggregate potential labor force participation rate, both in recent history and over the projection. The model estimates that from the end of 2007 through 2017 the cohort effects reduced the potential participation rate by 0.4 percentage points and are projected to further reduce the potential participation rate by another 0.4 percentage points through 2028. The age profiles of the labor force participation rate by birth-year cohort shown in Figure 4 foreshadow these results. The cohort profiles for females shifted up significantly through the 1945-to-1959 cohort before leveling off with each subsequent generation. Participation rates for males through about age 65, on the other hand, fell with each cohort.

*Disability.* Increasing disability insurance caseloads considerably reduced the potential labor force participation rate since the end of 2007, though that trend is projected to slow some over the projection. In particular, increases in disability insurance caseloads reduced the potential participation rate by 0.3 percentage points over the past 10 years and are expected to reduce the participation rate by an additional 0.1 percentage point by 2028. That fall in the participation rate from increases in disability is largely concentrated among the less educated and continues a trend that started around 2005.

*Social Security Primary Insurance Amount Payout Ratio.* The model's estimates imply that changes in the PIA payout ratio reduced the overall participation rate by 0.1 percentage point over the past 10 years. In addition, the model predicts that further changes in the payout ratio will lower the aggregate potential participation rate by 0.3 percentage points from 2018 through the end of 2028. The payout ratio varies by single-year age groups, and changes in the ratio, if any, tend to provide a lower benefit for a given age over time. The model, however, estimates participation rates for broader age groups. Although payout ratios within single-year ages tend to decline over time (if they change at all), it is possible for age group payout ratios to increase over time if the population within those groups shifts toward ages with higher payout ratios.

The decline over the projection follows from the aging of the population within the age groups for people 62 or older. That aging increases the average payout ratio for many of those groups. An increasing payout ratio increases the incentive for an individual to retire, thus lowering the participation rate.

*Family Structure.* The number of married males as a share of the male population decreased since the end of 2007 and is expected to continue decreasing over the next decade, though at a slower pace. Because married males have higher participation rates than unmarried males, this change in composition places downward pressure on the labor force participation rate. In particular, the decreasing share of married

males reduced the potential participation rate by 0.3 percentage points over recent history and is projected to reduce the potential participation rate by an additional 0.1 percentage point by 2028, as the pace of the decline in the share of married males slows.

Conversely, the decline in the fraction of females who are married with young children has boosted the potential participation rate in recent history. Married females with young children have lower rates of labor force participation than do other females. A decreasing share of married females with young children raised the potential participation rate by 0.1 percentage point since the end of 2007. Over the projection period, the share of married females with young children is expected to change little; therefore, this factor is expected to have little effect on the potential participation rate. The share of females who are married without young children has also boosted the potential participation rate by about 0.1 percentage point in recent history, but that share has a negligible effect over the projection. The share of females who are unmarried with young children has modest effects on the potential participation rate both in recent history and over the projection.

*School Enrollment.* Increases in school enrollment since the 2007–2009 recession are associated with significant reductions in the participation rates of people ages 16 through 24. Since 16- to 24-year-olds make up a relatively small share of the population, the large reduction in participation of the young associated with increases in school enrollment translates to a relatively small reduction in the aggregate rate. Since 2007, increases in school enrollment are estimated to have reduced the aggregate potential rate by 0.1 percentage point. Over the projection period, the school enrollment rate is expected to change little and does not contribute meaningfully toward changing the aggregate rate.

*Real Hourly Wage.* Changes in the log real hourly wage by group have had negligible effects on the potential participation rate since 2007 but are projected to lower it by 0.1 percentage point through 2028. Because log real hourly wages are included as a proxy for shifts in the relative demand for workers with different levels of education, the declines in participation from changing log real hourly wages are concentrated, not surprisingly, among workers with less education.

*Minimum Wage to Median Wage Ratio.* Changes in the real minimum wage to median wage ratio are estimated to have negligible effects on the overall potential participation rate in both recent history and over the projection.

*Federal Fiscal Policy.* CBO estimates that federal fiscal policy, on net, lowers the projected potential labor force participation rate by reducing the incentives to work. An important impact of federal fiscal policy on labor force participation comes from various provisions in the Affordable Care Act (ACA). The ACA raises effective tax rates on earnings—workers with higher earnings receive fewer subsidies in the health care marketplaces—and thus reduces the amount of labor that some workers choose to supply.<sup>32</sup> CBO estimates that those provisions have reduced the potential labor force participation rate by roughly

<sup>32</sup> The mechanisms driving the labor supply effect are summed up on page 33 of Congressional Budget Office, *An Update to the Budget and Economic Outlook: 2015 to 2025* (January 2015), [www.cbo.gov/publication/50724](http://www.cbo.gov/publication/50724). “That effect occurs partly because the health insurance subsidies that the act provides through the expansion of Medicaid and the exchanges are phased out for people with higher income, creating an implicit tax on the additional earnings of some people, and partly because the act directly imposes higher taxes on the labor income of other people.” For more on how CBO estimates the effects of fiscal policy on labor supply, please see Edward Harris and Shannon Mok, *How CBO Estimates the Effects of the Affordable Care Act on the Labor Market*, Working Paper 2015-09 (Congressional Budget Office, December 2015), [www.cbo.gov/publication/51065](http://www.cbo.gov/publication/51065).

0.3 percentage points since 2007. However, CBO estimates that most of the effects of the ACA on participation have already taken place and, as a result, expects any further effects to be small over the projection.

In addition to the ACA, other forms of fiscal policy affect individuals' willingness to supply labor. In particular, the recently enacted Public Law 115-97 (originally called the Tax Cuts and Jobs Act) lowers effective marginal tax rates, motivating individuals to increase their supply of labor. Furthermore, P.L. 115-97 eliminated penalties associated with the ACA's mandate that people obtain health insurance, thus reducing some of the effects of the ACA on the labor force participation rate. Altogether, the various provisions of P.L. 115-97 increase the potential participation rate by as much as 0.3 percentage points from 2021 through 2025 in CBO's estimates. However, many of the provisions of P.L. 115-97 are scheduled to expire starting in 2025, and as a result, the increase in potential participation from that legislation will dissipate. On net, the change in the potential participation rate from the end of 2017 through the end of 2028 is estimated to be positive but slight.

The effects of fiscal policy on labor force participation are not estimated directly in this model. Rather, the effects are estimated outside of the model and then added to the model's projection. CBO attributes the ACA's effects on labor supply to individuals ages 16 through 64 and allocates them among the age-sex-education-race subgroups in the model.<sup>33</sup> Specifically, the agency calculates the average uninsured shares of each age-sex-education-race subgroup as a fraction of the 16-to-64 population from 2000 through 2009. CBO applies those average, historical uninsured shares to the total level change in the labor force resulting from the ACA to arrive at the total change for each age-sex-education-race subgroup of the population. That results in the effects of the ACA on the labor force participation rate being disproportionately concentrated among the young, those in the early retirement years (55 to 64), and those in the prime working years with lower levels of educational attainment.

To attribute the effects of P.L. 115-97 to the various subgroups of the model, CBO apportions them according to each subgroup's share of the population ages 16 through 64.

*Interaction Residual.* To separate changes in the aggregate potential labor force participation rate into changes from the evolving age, sex, education, and race distributions and from changes in group-specific participation rates, CBO uses a shift-share analysis. However, the sum of the changes to the aggregate labor force participation rate stemming from changes in age, sex, educational attainment, race, cohort effects, and the structural variables in the model do not equal the change in the overall participation rate. The difference (or residual) arises because of interactions between changes in the distributions (that is, the share of people of a given age, sex, educational attainment, and race) and the group rates (which are determined by the cohort effects and the structural variables in the model).<sup>34</sup> Since the end of 2007, these

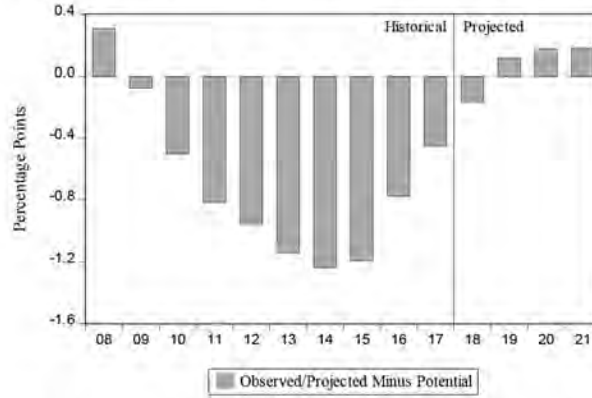
<sup>33</sup> At age 65, individuals become eligible for Medicare.

<sup>34</sup> In particular, a simple shift-share decomposition of the change in the aggregate labor force participation rate at time  $t$  relative to fixed reference date in history, time 0, takes the following form:

$$LEPR_t - LEPR_0 = \sum_g s_0^g (lfpr_t^g - lfpr_0^g) + \sum_g lfpr_0^g (s_t^g - s_0^g)$$

interactions are estimated to have increased the aggregate rate by 0.3 percentage points. Over the projection, CBO estimates those effects to be much smaller and slightly negative, reducing the potential participation rate by about 0.1 percentage point.

**Figure 11. Labor Force Participation Rate Cyclical Gap, 2008 to 2021**



Sources: Congressional Budget Office, author's calculations using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

#### Decomposition: Fluctuations With the Business Cycle

The labor force participation rate shows clear cyclical patterns, falling relative to its potential during and after recessions and increasing relative to its potential during expansions. The estimated cyclical effect on labor force participation is simply the difference between the potential and observed labor force participation rates. After the most recent recession, the labor force participation rate reached its cyclical trough in 2014, about five years after the end of the recession. Though this cyclical decline lasted longer than previous recessions, both the 1990 and 2001 recessions also saw cyclical declines that lasted well beyond the end of the recession—about three years after each of those recessions—suggesting that participation rates react to the business cycle with long lags. However, after remaining near its cyclical trough for an additional year or so after each of the past three recessions, the participation rate started a

$$+ \sum_g (lfp_t^g - lfp_0^g)(s_t^g - s_0^g)$$

where  $LFP_t$  is the aggregate labor force participation rate,  $lfp_t^g$  is the labor force participation rate of each group, and  $s_t^g$  is each group's share of the population. The first term on the right-hand side of the equation holds each group's share of the population constant at its time 0 value and allows the aggregate participation rate to change solely by changes in group rates. The second term holds the group rates constant and allows the aggregate participation rate to change solely by changes in the group shares of the population. The third and final term is an interaction residual of the changing group shares and changing group participation rates.

clear recovery, and the rate of that recovery appeared to increase the closer the observed rate got to its estimated potential.<sup>35</sup>

The cyclical gap in the labor force participation rate has decreased considerably over the past three years. The cyclical gap reached its largest estimated value in 2014, averaging about 1.2 percentage points below potential and has been declining since (see Figure 11). The estimates indicate that the labor force participation rate was still below its potential by about 0.4 percentage points in 2017. However, CBO's model predicts that the cyclical gap in the labor force participation rate will mostly close by the end of 2018, as the potential participation rate is projected to fall by about one-quarter of one percentage point while the predicted rate remains mostly flat over that year. That flat predicted observed participation rate reflects a balancing of structural and cyclical factors in the model, as structural trends are placing significant downward pressure on the labor force participation rate while the continuing cyclical recovery is placing significant upward pressure on the labor force participation rate. This counterbalance also probably explains the relatively flat observed labor force participation rate since the end of 2013, which has displayed only small fluctuations around 62.8 percent.

**Table 6. Comparisons of Labor Force Participation Rate Projections**

Year	CBO	Annual Average, in Percent		
		Social Security Administration	Bureau of Labor Statistics	Macroeconomic Advisers
2018	62.9	63.1	62.3	62.8
2019	62.9	63.3	62.1	63.0
2020	62.7	63.3	62.0	63.2
2021	62.5	63.3	61.8	63.1
2022	62.2	63.1	61.6	62.9
2023	61.9	62.9	61.4	62.7
2024	61.5	62.6	61.3	62.5
2025	61.1	62.4	61.1	62.2
2026	60.8	62.3	61.0	61.9
2027	60.4	62.2		61.7
2028	60.1	62.1		61.6

Sources: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey; the Social Security Administration (unpublished projections); the Bureau of Labor Statistics (projections are from Lacey et al., 2017); and Macroeconomic Advisers by IHS Markit (projections are from their February 2018 macroeconomic forecast).

#### Comparisons With Other Forecasts of Labor Force Participation Rates

CBO's projection for the labor force participation rate, based on the model described above, is generally similar to the projections of other forecasters. In the near term, CBO's forecast is in the middle of those forecasts over the next few years (see Table 6). CBO projects that the labor force participation rate will fall from an average rate of 62.9 percent in 2018 to 62.2 percent in 2022. That projected path lies above the path from the Bureau of Labor Statistics (BLS), whose participation rate projection reaches 61.6

<sup>35</sup> Van Zandweghe (2017) finds that cyclical fluctuations in labor force participation became more pronounced after 1984. Erceg and Levin (2014) use state-level data to show that labor force participation rates of prime-age workers by state were highly responsive to changes in prime-age unemployment rates in those states during and immediately after the 2007–2009 recession.

percent in 2022, but below the projected paths of both the Social Security Administration (SSA) and Macroeconomic Advisers (MA), whose participation rate projections reach 63.1 percent and 62.9 percent, respectively.<sup>36</sup>

Over the latter half of the next decade, however, CBO projects the participation rate will fall at a faster pace than other forecasters project. The CBO model predicts that the labor force participation rate will fall from an average rate of 62.2 percent in 2022 to 60.8 percent in 2026 and 60.1 percent in 2028—an average decline of roughly 0.3 percentage points per year over that six-year period. CBO's projected participation rate over this period, though, is not meant to capture business cycle dynamics but rather the trend rate that results largely from demographics and the other structural factors described above. Indeed, that decline reflects the decrease in CBO's estimated potential participation rate over that period. For comparison, BLS projects the participation rate will fall to 61.0 percent in 2026, whereas the SSA's and MA's projections have the participation rate falling to 62.1 and 61.6 percent, respectively, in 2028. Those declines average about 0.2 percentage points per year.

### **Labor Force Participation Rate of Prime-Age Workers**

An advantage of CBO's model is that it allows for an analysis of the participation of many potentially important subgroups of the population. One group that is particularly important in examining the health of the labor market is the prime-working-age population—that is, people ages 25 through 54.<sup>37</sup> As was the case for the participation rate for people at least 16 years old, the overall fit of the model, as reflected in the mean absolute and root mean square errors of the participation rate for people who are between 25 and 54 years old, is close overall but with some misses in the subsamples (see the last two columns in Table 3).

A visual comparison of the fitted rate with the observed rate shows that the model fits the data well for most of the sample, with only a few years of deviations causing any increase in the mean absolute or root mean square errors (see Figure 12). As was the case for the aggregate rate, the prime-age estimates miss the most during 2012 and 2013, as the estimated rate is above the historical data by about 0.5 percentage points, on average, for those years. The fitted rate is also below the observed rate from 2014 through the middle of 2015, though by a smaller amount than in 2012 and 2013—about one-quarter of one percentage point, on average. However, the model's predictions return to be near the observed data by the end of history.

The potential prime-age labor force participation rate follows a pattern similar to that of the potential aggregate labor force participation rate over history: It increases through the 1980s and early 1990s, peaks in the middle of the 1990s, and then starts a continuous decline in the late 1990s that persists through about 2017. The magnitudes of the changes in rates giving rise to that pattern, though, are much smaller than the changes in the aggregate rate. In particular, the potential prime-age labor force participation rate

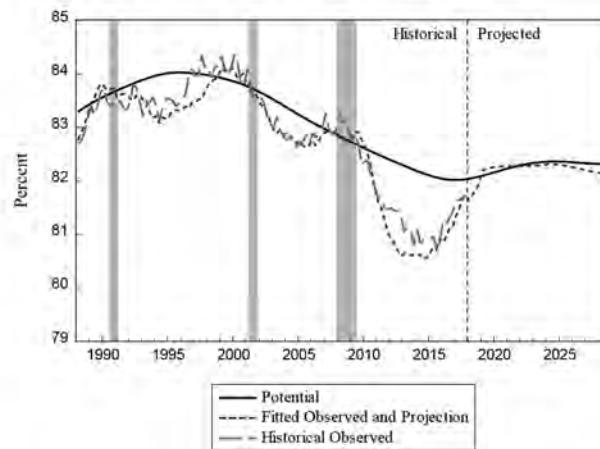
<sup>36</sup> The BLS projections are from Lacey et al. (2017) and use historical data through 2016 to project the participation rate from 2017 through 2026. The SSA projections are unpublished and use historical data through 2017 to project the participation rate from 2018 through 2091. The MA projections are unpublished and use historical data through 2017 to project the participation rate from 2018 through 2028.

<sup>37</sup> For a broader discussion of factors affecting the labor force participation rate of prime-age workers, see Congressional Budget Office (2018).



fell by 2.0 percentage points over the past roughly two decades, from its peak of 84.0 percent in the middle of the 1990s to 82.0 percent by the end of 2017. However, that decline is entirely unrelated to aging. Interestingly, that downward trend stops over the projection period, when CBO expects that the net change in the potential prime-age participation rate will be slightly positive at about 0.3 percentage points.

**Figure 12. Prime-Age Labor Force Participation Rate**



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

The prime-age potential labor force participation rate fell by 0.8 percentage points from the end of 2007 through the end of 2017. The largest contributors toward a falling prime-age potential participation rate are, by far, the cohort effects (a 1.0 percentage-point decline over the previous 10 years), increasing disability rates (0.6 percentage points), federal fiscal policy (0.4 percentage points), and declining marriage rates for males (0.4 percentage points). Those declines are largely concentrated in groups with less education (see Table 7).

Part of the decline in recent history has been offset by an increase in educational attainment. An increasing share of the population in recent years has received bachelor's degrees, and that trend is expected to continue through the projection period. Because individuals with higher levels of educational attainment participate at higher rates, shifting the population toward more education tends to raise participation. In particular, the changing educational attainment distribution contributed to an increase of 1.1 percentage points in the prime-age potential labor force participation rate since the end of 2007. That increase, however, was not enough to offset the decline resulting from other variables.

Over the next decade, the prime-age potential labor force participation rate is projected to *increase* by about 0.3 percentage points, from 82.0 to 82.3 percent by 2028. The prime-age potential participation rate

increases over the projection because CBO expects that educational attainment will continue to increase over the next 11 years as it has over the past 10 years, while the factors lowering the potential rate in recent history will do so to a lesser degree over the projection. That continued increase in overall educational attainment is expected to contribute to an additional increase of 1.2 percentage points in the potential prime-age rate.

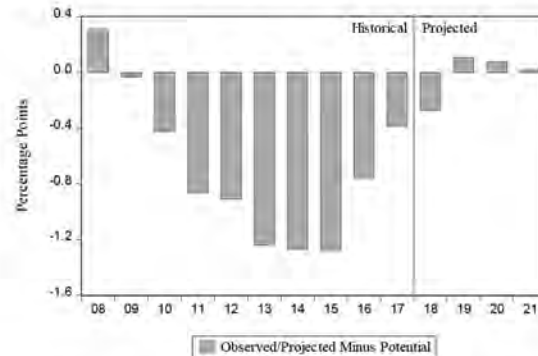
**Table 7. Decomposing the Change in the Prime-Age Potential Labor Force Participation Rate, 2007q4–2028q4**

Explanatory Variables	Contribution to Change (Percentage Points):	
	History 2007q4 → 2017q4	Projection 2017q4 → 2028q4
Age Distribution	0.0	0.1
Sex Distribution	0.1	0.1
Educational Attainment Distribution	1.1	1.2
Race/Ethnicity Distribution	-0.1	-0.1
Birth-Year Cohort Effects	-1.0	-0.6
Disability	-0.6	-0.2
PIA Ratio	n/a	n/a
Married Males	-0.4	-0.1
Married Females with Young Children	0.3	0.0
Not Married Females with Young Children	0.1	0.0
Married Females without Young Children	0.2	0.1
School Enrollment	n/a	n/a
Real Wage	0.0	-0.1
Minimum Wage-Median Wage Ratio	0.0	0.0
Federal Fiscal Policy	-0.4	0.0
Interaction Residual	0.0	0.1
<b>Total Change</b>	<b>-0.8</b>	<b>0.3</b>

Sources: Congressional Budget Office; author's calculations using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

Between 2017 and 2028, however, the prime-age potential labor force participation rate is projected to increase by as much as 0.3 percentage points before falling back to 82.3 percent by the end of 2028. The increase and then decrease in the potential prime-age rate over the next decade results from the structure of P.L. 115-97. That legislation lowers effective marginal tax rates through 2024, incentivizing individuals to increase their supply of labor and increasing the prime-age potential participation rate. However, as many of the provisions of P.L. 115-97 are scheduled to expire starting in 2025, the increase in the prime-age potential rate from the legislation will dissipate, thus lowering that rate.

Other factors, though, are expected to reduce the potential prime-age participation rate in the projection. Again, the largest contributor toward a reduction in that rate is the cohort effects, which are projected to reduce the prime-age potential rate by an additional 0.6 percentage points. Increases in disability rates are projected to lower the prime-age potential rate by 0.2 percentage points, a contribution about one-third of that over the past 10 years as increases in disability caseloads are projected to slow. Additionally, declining real wages are projected to reduce the prime-age potential rate by about 0.1 percentage point through 2028. Again, these projected declines are largely concentrated in groups with less education.

**Figure 13. Prime-Age Labor Force Participation Rate Cyclical Gap, 2008 to 2021**

Sources: Congressional Budget Office; author's calculations using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

Similar to the aggregate rate, the prime-age labor force participation rate shows clear cyclical patterns, falling relative to its potential during and after recessions and increasing relative to its potential during expansions. The estimates indicate that the cyclical gap for the prime-age labor force participation rate reached its largest estimated values between 2013 and 2015, averaging about 1.3 percentage points below potential across those years (see Figure 13). Since 2015, the cyclical gap has been declining at an increasing pace, though notable slack still remains. In 2017, the cyclical participation gap for prime-age workers was estimated to be 0.4 percentage points. CBO expects slack among prime-age workers to remain in 2018, with the cyclical gap averaging about 0.3 percentage points, before the gap closes by 2019.

#### **Estimates for Prime-Age Workers by Educational Attainment: Potential and Future Trends**

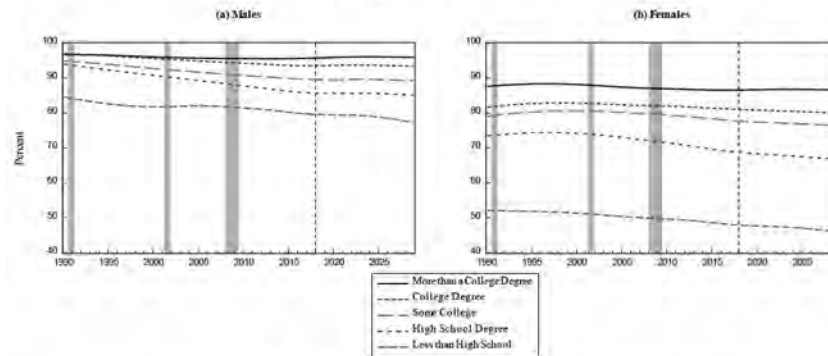
Labor force participation rates for prime-age workers vary significantly across levels of educational attainment for both males and females. Furthermore, the labor force participation rates for less educated workers have been falling throughout the entire sample period for males and since 2000 for females, while the participation rates for the most educated were relatively flat. Those trends have led to a growing divergence in labor market attachment between the most and least educated individuals.<sup>38</sup>

Because the model is constructed to estimate labor force participation rates by age-sex-education-race groups, it can help answer a number of questions: What is the impact of the diverging trends in prime-age labor force participation rates between the most and least educated on the overall rate? How much of the

<sup>38</sup> Council of Economic Advisers (2016) shows that the labor force participation rate for prime-age males has been declining since the middle of the 1960s and that the decline has been largely concentrated among the less educated. They argue that this persistent decline reflects the long-term reduction in the demand for low-skilled male labor, as evidenced by the long-term decrease in wages for this group relative to males with more education.

fall in the labor force participation rates of the less educated over the past decade stems from cyclical weakness or from declining potential participation rates?

**Figure 14. Potential Labor Force Participation Rates, by Educational Attainment, for Prime-Age Workers**



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics<sup>1</sup> and U.S. Census Bureau's Current Population Survey.

*Potential Labor Force Participation Rates for Prime-Age Workers by Educational Attainment.* The estimated potential participation rates by sex and educational attainment capture the general trends illustrated in Figure 2. For males, participation rates have been relatively flat for those with more than a college degree, with an estimated potential rate of between 96 percent and 97 percent for the entire sample and projection period (see panel (a) of Figure 14). Potential participation rates for every other level of educational attainment have been trending downward, with faster declines at each lower level of educational attainment—consistent with the historically observed data.

For females, participation rates for nearly all levels of educational attainment increased through about 2000, consistent with the increase in the overall female rate over that period (see panel (b) of Figure 14).<sup>39</sup> However, after 2000, the rates of the most and least educated began to diverge, largely driven by falling rates among the least educated females. The participation rates for females with more than a college degree remained relatively flat since 2000, whereas the participation rates fell at a faster rate for females at each lower level of educational attainment, driven largely by females with high school degrees. The end result has been a growing divergence in participation between the most and least educated males and females.

The potential labor force participation rates for males with college degrees and males with less than college degrees are projected to decline further into the next decade. The fall in the rates for males with college degrees, some college, and high school degrees is projected to slow, with each declining by less than a percentage point to 93 percent, 89 percent, and 85 percent, respectively, in 2028. Potential

<sup>39</sup> Participation rates for females with less than high school degrees declined slightly over that period.

participation rates for males with less than high school degrees, though, are expected to fall by an additional 2 percentage points over the projection to 77 percent—a decline similar to that of the previous decade.

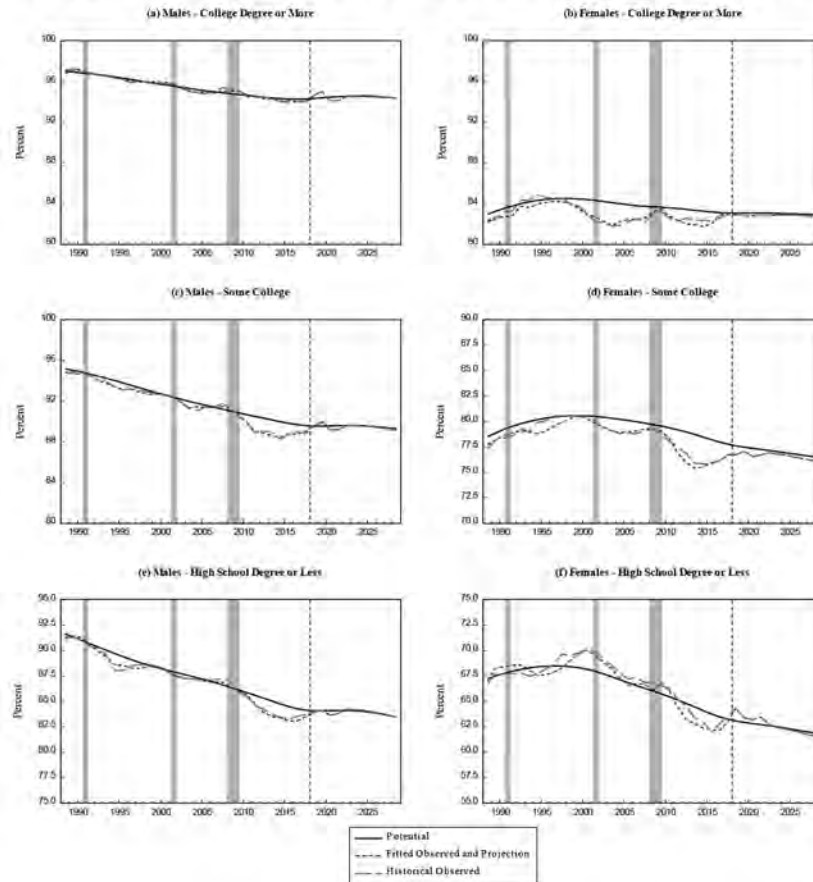
The potential labor force participation rates for females show similar qualitative patterns. Females with more than college degrees are estimated to have a stable potential participation rate over the projection at 87 percent. Potential rates for females with college degrees are projected to fall slightly through 2028, by about 1 percentage point, to 80 percent, whereas potential rates for females with high school degrees are expected to fall by about 2 percentage points, to 67 percent.

*Cyclicity in Prime-Age Labor Force Participation Rates for Prime-Age Workers.* The fit of the model is again very good for all age-sex-education groups in the prime-working-age population. There are few periods from 1984 through 2017 that display a significant, consistent deviation of the estimates from the observed data. Additionally, there is clear heterogeneity across sex-education groups in the amount of cyclicity the observed participation rates show: Some show almost no cyclicity at all, whereas others have wide fluctuations from potential over the business cycle.

Males with college degrees or more display little, if any, cyclicity.<sup>40</sup> The observed participation rate for males with college degrees or more does fall below its estimated potential rate following each of the past three recessions, but rarely by more than three-tenths of one percentage point (see panel (a) of Figure 15). That group's observed rate follows the estimate of its potential rate almost exactly, with only small deviations at any point.

<sup>40</sup> For conciseness, CBO combines the college degree and more than college degree groups and the high school degree and less than high school degree groups.

Figure 15. Labor Force Participation Rates, by Educational Attainment, for Prime-Age Workers



Source: Congressional Budget Office, using information from the Bureau of Labor Statistics' and U.S. Census Bureau's Current Population Survey.

Females with college degrees or more, however, show a somewhat surprising pattern. Although the observed rate for that group displays the traditional u-shaped pattern, its timing with the business cycle is inconsistent across each of the past three recessions. The observed rate for females with college degrees increased through the 1991 recession until the middle of the 1990s and then declined through the 2001 recession until the middle of the 2000s. Furthermore, the observed rate remained below its estimated

potential since the late 1990s. Since the most recent recession, however, the observed rate for the most educated females follows the business cycle much more closely. That rate peaked in 2009 and fell through 2011. It remained flat through 2015 before showing signs of a pickup. By 2017, the gap between the potential and observed rates for that group nearly closed, as the observed rate was only 0.2 percentage points below its potential rate (see panel (b) of Figure 15).

Both males and females with some college show evidence of a clear and potentially large cyclical response on the participation margin, even as those groups' participation rates have trended downward for significant periods (see panels (c) and (d) of Figure 15). The cyclical gap for males with some college that opened following the 2007–2009 recession peaked at roughly 1.7 percentage points below the potential rate in 2014. That gap closed substantially in recent years, but the observed rate for males with some college still remained about 0.8 percentage points below its potential rate in 2017. The cyclical gap for females with some college has been larger than that of males, peaking at roughly 3 percentage points below the potential rate in 2014. That gap has closed considerably in recent years but is still estimated to be about 1.1 percentage points below the potential rate in 2017.

The participation rate for males with high school degrees or less also shows clear cyclical behavior associated with each of the past three recessions—the rate falls below its estimated potential around or during the recession, remains low relative to its potential for several years following the recession, then increases relative to its potential for the remainder of the cycle (see panel (e) of Figure 15). Following the 2007–2009 recession, the participation rate for prime-age males with high school degrees or less fell as much as 1.3 percentage points below its estimated potential rate in 2013, and that cyclical gap remained at that level through 2015. Since 2015, the rate for males with a high school diploma or less has increased but still remained about 0.5 percentage points below its potential rate in 2017.

Females with high school degrees or less also show increases and declines in their participation rate that are consistent with economic expansions and recessions (see panel (f) of Figure 15). However, that group's participation rate remained mostly above its potential rate from the late 1990s through the 2007–2009 recession. This surprising result suggests that the participation rate of females with high school degrees or less had a particularly large cyclical response to the strong economy of the late 1990s. The relatively mild recession of 2001 lowered the observed rate only to its potential rate and was not a large enough downturn to push it down further. That rate fell substantially below its potential during the slow recovery to the 2007–2009 recession, reaching a trough of about 1.8 percentage points below potential in 2015. Since 2015, however, the participation rate for females with high school degrees or less has increased considerably and that gap closed by 2017.

Overall, participation rates for both prime-age males and females show clear cyclical movements, though the cyclical responses are larger for females than for males and larger for those with less education than for those with more education. Furthermore, there still appears to be room for a cyclical increase in the participation rates of prime-age workers over the next few years. Cyclical effects aside, though, the potential participation rates of most education groups of prime-age workers examined here are projected to continue falling through the projection period, putting downward pressure on the overall participation rate. Those trends and their impact on the aggregate labor force participation rate warrant further investigation.

## Conclusion

This paper details CBO's methodology for estimating and projecting labor force participation rates. CBO constructs a birth-year cohort model of the labor force participation rate that estimates labor force participation rates by age-sex-education-race subgroups. Using the estimated model to project rates over the next decade, CBO expects the overall rate to decline by 2.7 percentage points, reaching 60.1 percent by 2028.

Most (2.5 percentage points, or about 80 percent) of the 3.2 percentage-point decline since the 2007–2009 recession in the labor force participation rate for the population at least 16 years old is the result of aging. That decline continued a trend that began in the late 1990s and early 2000s as the early baby-boom cohorts began to turn 50 years old, the age at which individuals tend to start reducing their participation in the labor force. CBO projects that the continued aging of the population will further reduce the overall participation rate over the next 11 years by an additional 2.8 percentage points, as most baby boomers age into retirement.

Although aging is the primary driver of the falling labor force participation rate, it is not the only driver, as other structural factors are driving down some group-specific participation rates. First, the members of younger birth cohorts, who are replacing baby boomers in the labor force, have participated in the labor force at lower rates, and CBO projects that this trend will continue to weigh down the participation rate over the next decade. Second, the share of people receiving disability insurance benefits is generally projected to continue rising, and people who receive such benefits are less likely to participate in the labor force. Third, the marriage rate has declined and is projected to continue decreasing, especially among men, and unmarried men tend to participate in the labor force at lower rates than married men. Finally, elements of fiscal policy, including various provisions of the ACA, have increased effective marginal tax rates and reduced the incentive for individuals to supply labor in recent years. The effects of many of these structural factors have been concentrated among the less educated, contributing greatly to the decline in the participation rates of these groups.

Cyclical weakness was also an important factor weighing down the labor force participation rate over much of the previous decade, even as that rate has had much cyclical improvement in recent years. CBO's estimates show that the drag on the overall participation rate from discouraged job seekers leaving the labor force was as much as 1.2 percentage points in 2014. Since then, many discouraged workers have reentered the labor force, and that cyclical weakness has diminished considerably. CBO estimates that the labor force participation rate remained only 0.4 percentage points below its potential rate in 2017, and that gap will close entirely in the coming years.

Increases in populationwide educational attainment have helped boost the participation rate since 2007, on the other hand, as more of the population now holds a bachelor's degree. CBO estimates that increases in educational attainment have increased the observed labor force participation rate by nearly a full percentage point over the past decade, all else being equal, highlighting the importance of modeling educational attainment in projections of the labor force participation rate. CBO projects these trends to continue over the next decade, boosting the participation rate by almost another full percentage point.



Although most of the decline in the overall labor force participation rate comes from the aging of the baby-boom generation, the decline in the prime-age labor force participation rate over the past decade is entirely unrelated to aging. Instead, other structural factors, including the declining propensity of successive cohorts to participate in the labor market, the increase in disability insurance incidence, the declining male marriage rate, and fiscal policy, have contributed most to the decline in that rate. The contribution of most of those factors to the declining prime-age labor force participation rate has been concentrated among the less educated. CBO expects the contribution of some of those factors to dissipate over the next decade—namely the declining male marriage rate and fiscal policy—whereas others will continue to weigh down the prime-age rate over the next decade.

Furthermore, CBO finds that the effects of the 2007–2009 recession reduced the prime-age labor force participation rate considerably and that lingering cyclical weakness from the aftermath of that recession still lowers that rate some. The agency estimates that cyclical weakness reduced the prime-age rate by as much as 1.3 percentage points in 2014 and 2015. Although the improving economy and labor market have pulled some discouraged prime-age workers back into the labor market, CBO estimates that the prime-age labor force participation rate was still 0.4 percentage points below its potential in 2017.

As was the case for the overall participation rate, part of the decline in recent history of the prime-age rate has been offset by the evolving educational attainment distribution. Because individuals with higher levels of educational attainment participate at higher rates, the shift toward more education in the population results in higher rates of participation. The changing educational attainment distribution contributed to an increase in the prime-age potential labor force participation rate of more than a percentage point since the end of 2007. That increase, however, is not enough to offset the decline resulting from other variables.

Over the next decade, as the downward pressure from other structural factors on the prime-age labor force participation rate is expected to dissipate, CBO projects that increases in educational attainment will fully offset downward pressure on that rate from those other factors. In addition to the upward pressure from continued increases in educational attainment, CBO expects further cyclical improvement to draw more individuals who had been discouraged from seeking work back into the labor market. As a result, CBO expects those factors to drive an increase in the observed prime-age labor force participation rate over the next decade, from 81.7 percent in 2017 to 82.1 percent in 2028.

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Mr. SCHWEIKERT. I think it is important to see that. Both right and left want solutions to this. Sometimes we may come at it from different directions.

What do you see working most effectively right now?

Ms. SHAPIRO. Our partnership with Gap is a great example, but we have a lot of other industry partnerships as well. So, we have a culinary industry partnership, an IT industry partnership. We are training young people for EMT jobs. We are working with the masonry and historical preservation industry. And so, these industry partnerships and employer partnerships are working. It is just there are a lot of young people who are left behind who need more support and more prep—

Mr. SCHWEIKERT [continuing]. Are you sometimes taking someone who may have a bit of a dodgy past, and are you accepting them, training them, hoping they are showing up at their meetings? What are you doing?

Mr. STAUB. Yes. We have hired some folks who have had a not so great past and entering them in to our finishing department where we train them and see how they do there, and we can give them the skills to move forward and do computer operating machinery or other skills, welder, or whatever is needed and what path they are interested in.

Mr. SCHWEIKERT. Mr. Johnson.

Mr. JOHNSON. I just have a comment. The bottom line comes down to this, either we have truly a second chance society or we don't. And part of the barrier for people with need for a second chance has to do with how we ask them if they are available or if they are okay to work. We ask them questions like, "have you ever," instead of, "have you in the last 7 years."

Mr. SCHWEIKERT. Mr. Chairman, I know I am way over time, but you are actually seeing some really interesting stuff in the data. Felons, people with some really difficult pasts are getting jobs.

How do we, as policymakers, make it so if someone needs to go to their 12-step meeting over lunch, that that is embraced? It is almost a rethinking, and I am hoping this labor force shortage is making a difference in our society.

Chairman SMITH. There is considerable interest in these win-win scenarios of bringing folks off the sidelines and focusing on the future.

Next up is Mr. Curbelo for 5 minutes.

Mr. CURBELO. Thank you very much, Mr. Chairman.

I am grateful to you and to the Ranking Member and to really the entire Committee for dedicating so much time to this issue, to figuring out how we can work together as an institution with the private sector, with local and State partners, to improve the lives of disconnected youth, a lot of these young people who want to make their contribution to the world, to their communities, but just can't figure out how. And all of you who are here today in some way are dedicating a lot of your own personal time to figuring out a way forward for these young people so they can integrate into our society and be productive. I think you should all be commended for it.

I am especially grateful because, in south Florida, we have a wonderful organization called Youth Co-Op that partners with Gap's This Way Ahead program to promote the well-being of at-risk youth in the community through education, employment, and empowerment.

But a question I have for Mr. Ard, for Mr. Staub, and for anyone else who wants to answer it, and I think it was touched upon earlier, but we should explore it more deeply.

The Federal Government, does it have a visible role? Is it a reliable partner?

You work on this every day.

What difference is the Federal Government making in terms of helping these young people find their pathway to success?

Mr. Ard, if you want to take it first, please.

Mr. ARD. It is definitely a big question and one that I think we are grappling with on a pretty regular basis in my company. I think there is opportunity for all of us to do more. What we are doing currently is certainly on a more localized level with organizations for example with Youth Co-ops and things, something along those lines, The Door, our Boys and Girls Club. So, this is certainly an opportunity for the Federal Government to do more. Otherwise, it is a patchwork of experiences that you are being strung together and look different State-by-State.

Mr. CURBELO. Mr. Staub.

Mr. STAUB. There certainly is, like the Perkins bill that is currently in front of the Senate, things like that, to help the community and technical colleges get the funding and resources they need to have the equipment that they can train their students on. And there is opportunity too for the Federal Government to reach out to the education system to let them help spread the message that you don't have to get a 4-year degree.

Today, the average attorney makes about the same as the average machinist when you figure out the college debt and the timeframe when they can earn their highest wages.

It is very surprising that most people don't understand that, and we have an opportunity to share that message that many educators don't know, and we can help educate them too.

Mr. CURBELO. Mr. Chairman, I think this is an interesting point because American taxpayers contribute billions of dollars every year to support those who are in need. And I think most Americans really do it proudly because we all want to help people who are struggling who need a hand up. But I think it is pretty clear from the testimony today and from all the different questions and answers that we have heard, that we can do a lot better as a Federal Government.

Obviously, a great emphasis on education. I fully agree. I think we need to stop lying to young people by telling them there that there is only one pathway to success, which is a traditional 4-year degree. It works for a lot of people. It worked for me, but it does not work for everyone. We have created a stigma that is very dangerous.

I hope from this Committee we can continue supporting those efforts to present the full menu of education options and pathways to success.

And then I also think, in a lot of our social welfare programs, we need to do better and target them and make sure we are partnering with organizations and initiatives like the ones represented here today so that we can actually help empower people so they can grow independent of the government and kind of blaze their own pathway and find their role in the world.

So, Mr. Chairman, I am going to be generous and efficient here the way I expect our federal programs will be some day and give you back about 45 seconds.

Thank you. I yield back.

Chairman SMITH. Thank you, Mr. Curbelo.

Thank you to everyone for participating and, to our panel, for sharing your insights and your expertise. It is vital that we have these conversations. I think it is just a great reminder of what is at stake and how we want to focus on opportunity for the future, and like I said earlier, it is helping folks leave the sidelines and get in the action, because I think that it is just a win-win down the line positive scenario when we can help folks connect with opportunity for themselves personally, for their communities, for their families, you name it.

So, thank you again.

I will say that all Members will have 2 weeks to submit written questions to be answered later in writing. Those questions and your answers will be made part of the formal hearing record.

With that, the Subcommittee stands adjourned.

[Whereupon, at 1:23 p.m., the Subcommittee was adjourned.]

